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MOVABLE KIDNEY

(REN MOBILIS).

A CAUSE OF INSANITY.
HEADACHE, NEURASTHENIA,
INSOMNIA, MENTAL FAILURE,
AND OTHER DISORDERS
OF THE
NERVOUS SYSTEM.
A CAUSE ALSO OF
DILATATION OF THE
STOMACH.

C. W. SUCKLING, M.D.

18.6.105

Rec'd Jan. 12 06

THE BOSTON
Medical and Surgical
JOURNAL

MOVABLE KIDNEY.

7860

MOVABLE KIDNEY.

A CAUSE OF INSANITY, HEADACHE, NEURASTHENIA, INSOMNIA, MENTAL FAILURE AND OTHER DISORDERS OF THE NERVOUS SYSTEM. A CAUSE ALSO OF DILATATION OF THE STOMACH.

BY

C. W. SUCKLING, M.D. (LOND.), M.R.C.P.,

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LONDON:
H. K. LEWIS, 136, GOWER STREET,
1905.

Printed by The Midland Counties Herald Limited,
19, Union Street, Birmingham.

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How
One of the least
well arranged & written
books I have ever seen —
It is Egotistical — shows that

TO

MY WIFE.

the writer is not really familiar
with his subject

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BOSTON MEDICAL
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PREFACE.

On October 10th, 1905, ten days before the publishing of this book, I received from my bookseller the latest edition of one of our most valuable works on Medicine,[1] by Professor William Osler, Regius Professor of Medicine, Oxford University. Professor Osler gives only a very short *resumé* on the subject of Movable Kidney.

In this, however, are several statements which are so diametrically opposed to the results of careful examination and treatment of world known gynæcologists in America, and the daily increasing interest taken in the subject that I propose to examine these statements and point out the errors in them. Under "Symptoms of Movable Kidney,"[2] Professor Osler writes, "In a large majority of cases there are no symptoms, and if detected accidentally it is well not to let the patient know of its presence."

The examination for "dislocated kidney" on one or both sides takes only two or three minutes. Should a "classic" in medicine allow the possibility of the dislocation of a *vital* organ being discovered "accidentally"?

[1] "The Principles and Practice of Medicine," by William Osler, M.D. Sixth Edition. London: Sidney Appleton. New York: W. Appleton and Company, 1905.

[2] Page 665, Ibid.

I am certain that had Professor Osler made a special study, or read the up-to-date literature on the subject, or even had some of the cases and results which I am willing to demonstrate to him at any time, he would never have published that paragraph.

In stating that "in a large majority of cases there are no symptoms," Professor Osler is reverting to the time when Rosenstein wrote over twenty years ago: — "More important than congenitally displaced kidney is movable kidney, although it possesses rather a negative than a positive interest, so that a knowledge of the facts in point is more important as a means of avoiding errors of diagnosis than on its own account, *since the affection itself causes no great inconvenience, and treatment is powerless to relieve it.*"

Landau says: "It is more necessary to individualise with this than with regard to almost any other complaint." To-day, Noble, of Philadelphia, holds exactly this view.

Farther on Professor Osler states that[3] "Dilatation of the stomach has been observed, owing, as suggested by Bartels, to pressure of the dislocated kidney upon the duodenum. This view has been supported by Oser, Landau, and Ewald."

This is an error of Professor Osler's as regards

[3] Page 665, Ibid.

Landau, who writes that "the principal objection to Bartels' assumption is its inadmissibility on anatomical grounds."

Professor Osler writes: [4]"In neurasthenic cases a prolonged rest treatment is indicated."

I emphatically disagree with this. Such treat- is only of the slightest temporary relief, out of all proportion to the time and expense which the majority of such patients are able to afford. Three months rest and about one month's comparative health would be the result. Treves, in his paper in the "Practitioner" of January, 1905, unconsciously confirms my opinion *re* the above. He writes: "Since 1895 I have abandoned the operation of nephroraphy except in the following examples: Cases in which there were torsion symptoms, some cases in which the patient would be residing in the tropics, *many* hospital cases in which the patient had to work for her living, and could neither indulge in a long-sustained rest nor properly manage a truss."

So Treves would, according to his writings, operate on the larger class of cases, only allowing the good-paying patients the pleasure of indulging in a "Movable Kidney" in a tin receptacle.

In reading Professor Osler's description of Mucous Colitis[5] I was struck by the following fully quoted paragraph:—

[4] Page 666, Ibid. [5] Page 531, Ibid. The Italics are mine.—C.W.S.

"Symptoms of Mucous Colitis.—In a large proportion of all the cases the subjects are nervous in a greater or lesser degree. Some cases have had hysterical outbreaks, and there may be hypochondriasis or melancholia. The patients are self-centred and often much worried about the mucous stools. Some of the cases are among the most distressing with which we have to deal, invalids of from ten to twenty years standing, neurasthenic to an extreme degree, with recurring attacks of pain, and the passage of large quantities of mucous or even of intestinal casts.

"In many cases the attacks may come in paroxysms, associated with colicky pains, or occasionally crises of the greatest severity, so that appendicitis may be suspected. Emotional disturbances, worry of all sorts, or an error in diet may bring on an attack. Constipation is a special feature in many cases. "Sometimes there are attacks of nervous diarrhœa.

"While the disease is obstinate and distressing it is rarely serious, though Herringham states that he knew of three cases of mucous colitis in which death occurred suddenly, in all with great pain in the left side of the abdomen."

Had Professor Osler written above this, "Symptoms caused by Movable Kidney," he could not have made a better word-picture of

some of the results of that condition. Mucous colitis is sometimes the only symptom of movable kidney, and in cases where Nephropexy has been performed it entirely clears up, although the operation may have been undertaken for a different and more urgent symptom.

[6] "Far too much stress has been laid upon the condition of movable kidney of late years" writes Professor Osler. I venture to predict that in a future edition of his work this sentence will be omitted. I am astounded that he writes so lightly of a condition which the gynæcologist and neurologist find of such vital importance in each of their special branches.

Those medical men in general practice who are now waking up to its importance are astonished at the varied symptoms caused by the Ren Mobilis. When I state that I am able and willing to demonstrate and prove cases of insanity, caused by Ren Mobilis and cured by Nephropexy, before any body of medical men in the United Kingdom who may choose to challenge my statements, I feel that I have the strongest reason possible for urging all who are teaching our future medical men, to keep an open mind, and enquire thoroughly into the dire results of undiagnosed and untreated Movable Kidney.

[6] Page 665, Ibid.

I am willing to show the failures where the kidneys, not being properly fixed, have fallen, and the mental symptoms have remained unrelieved.

I am greatly indebted to Professor Goelet for the reprints he has sent me at intervals, and for his kindness in allowing me to publish plates, etc., of the operation for Movable Kidney.

I have to thank Mr. Barling, Mr. Gamgee, and Mr. Jordan Lloyd for their very valuable and plucky surgical work for me, and the latter for his contribution on the operation.

I also have to thank my wife (who suffered many years from dropped kidney and who is now cured) for much valuable help in writing this book. I thank, too, Mr. James Bertram Webb, of *The Midland Counties Herald*, for his great patience and skill in producing this medical work.

C. W. SUCKLING, M.D.

Birmingham,

October, 1905.

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CHAPTER I.

Some Literature on Movable Kidney,

With Notes Thereon.

IT has frequently been remarked to me by practitioners that they could not find any literature on the subject of "Movable Kidney." This is true as regards works on medicine and it shows the little attention given in this country to such an important subject. How very important movable kidney is has been proved by American Gynæcologists. Professor Goelet, of New York, Professor of Gynæcology, has found the condition existing in 33 per cent. of his out-patients taken at random.

I have found it present in about 40 per cent. of women, and in 6 or 7 per cent. of men, suffering from nervous disorders, the subject, therefore, is of the greatest importance to gynaecologists and to neurologists, it is also of importance to the general medical practitioner for it is a common cause of severe attacks of abdominal pain, and of neurasthenia and chronic ill health ; it is also of importance to the operating surgeon, for it often simulates and causes appendicitis, attacks of gall stone, colic, etc.

Many operations have been performed for supposed appendicitis when the real trouble has

been a movable right kidney. A prolapsed right kidney may not only cause symptoms of appendicitis but may actually produce it, probably by interfering with the circulation of the appendix. Movable Kidney will also cause attacks of pain simulating gallstone, renal colic, and intestinal obstruction. It is also a cause of hæmaturia, constipation, diarrhœa, colitis, albuminuria, and many other morbid conditions.

Everyone should read the article on "Movable Kidney" in Sir William Roberts' work on "Urinary and Renal Diseases."

Sir William Roberts has given it as his opinion that many cases are overlooked and that is a much more common condition than is generally supposed.

The article on "Movable Kidney," by Leopold Landau, of Berlin, translated by Dr. Champneys, and published by the New Sydenham Society, 1884, is well worth reading. This article extends over a hundred pages, and gives nearly two hundred references to the subject, and contains many beautiful illustrations.

"Movable Kidney" has also been called "Prolapse of the Kidney," "Ectopia of Kidney," "Floating Kidney," and "Mobile Kidney." A very good term for it is "Dropped Kidney." This term reminds the examiner that, to be sure about the diagnosis, the patient should be in the

erect position. The term "nephroptosis" must not be confounded with general enteroptosis of the abdominal organs, stomach, liver, spleen, intestines, and kidneys, called "Glénard's Disease."

"Glénard's Disease" is a very rare condition. I meet with only two or three cases a year whereas mobility of one or both kidneys I find in hundreds of cases every year.

"Dietl's crises" are described by Landau who says that patients with movable kidney after violent exertion or rapid movement, suffer from a sudden piercing pain in the abdomen which forces them to lie down, soon the whole abdomen becomes sensitive and distended and the side (of the prolapsed kidney) becomes exceedingly painful and tender, the patient is weak and faint and may vomit, the urine is dark and may contain blood.

There is little if any fever but there is a large swelling in the region of the prolapsed kidney, but which in the course of a few days subsides. Severe pain is frequently observed in movable kidney at the commencement of menstruation. Landau also gives prominence to the frequency of gastric disturbance, and states that jaundice may result from movable kidney.

In fourteen year's work on the subject I have never once met with jaundice as a result of movable kidney.

Hydro-nephrosis and Pyo-nephrosis are well known to be caused by a dropped condition of the kidney and may cause death. Thrombosis of the Vena Cava, or of either or both the common iliac veins may be produced by pressure of a prolapsed kidney, the lower end of the kidney being turned inwards.

Another work of great value containing an article on movable kidney is that of Henry Morris on the "Surgical Diseases of the Kidney," 1901, Castle and Co. Morris states that clinically there is no difference whatever between a movable kidney and a floating kidney, that a movable kidney may have a range of movement quite as great as a floating kidney, the latter being said to have a mesonephron. The presence of a mesonephron is very rare, and the term "floating kidney" might very well be dispensed with.

A movable kidney is one which moves abnormally freely behind the the peritoneum, it is between the peritoneum in front and the muscular parietes behind. In health the kidney cannot be felt either in the recumbent or in the erect position. The diagnosis of movable kidney can only be made with certainty by palpation, and this is as a rule very easy.

No operation should be undertaken unless the kidney is felt easily.

Repeated examination is necessary where the presence of a movable kidney is suspected, the organ may be felt at one time and not at another.

Morris considers nephropexy is safe and successful. Up to 1901 he had operated on 98 cases with one death from Cardiac Thrombosis in a stout female.

Morris explains why renal mobility is more frequent in the female; the reason given being that the renal fossa is not so deep and its width at the lower end is much greater than in the the male, moreover the abdominal muscles are weaker and the pelvis wider.

The reason why left movable kidney is more rare than the right is because the left renal fossa is deeper and the lower end narrower.

Morris states that when the kidney falls, the ureter is convex upwards being kept in place by the peritoneum.

This position of the ureter in my opinion explains many of the evil effects of movable kidney.

The urine in the day time when the patient is up and about cannot escape from the kidney and displaced ureter. Poisonous products in this retained urine are absorbed into the blood and affect especially the brain and nervous system, causing headaches, insanity, hypochondriasis,

loss of memory, and nervous exhaustion, with its many symptoms.

Fortunately the patient is not absolutely poisoned, because the rest in bed at night replaces the prolapsed kidney.

A dropped right kidney will mechanically produce dilatation of the stomach, the duodenum is attached to the right kidney, and when the kidney falls the pyloric orifice is narrowed and dilatation results, and ulceration, as shown in Dr. Bramwell's case (see page 27). I have met with many cases of dilatation of the stomach caused by a prolapsed right kidney.

In all cases of indigestion movable kidney ought to be examined for.

Morris states that the greater number of persons whose kidneys are movable know nothing about it and do not suffer in the least from it. The first statement is undoubtedly true, the second statement in my opinion is not.

People with movable kidneys are never well, if carefully questioned it will be found that they complain of debility or other symptoms, due to displaced kidney. Morris considers that electrical massage, rest, and belts are of little or no use. This is not correct with regard to the use of the belts. I have had many cases greatly relieved by belts, but the kidney can never be fixed by a belt, but it can be elevated and kept partially stationary

thus removing the symptoms of ill-health with great benefit to the patient. Rest, and the Weir Mitchell treatment, massage, and electricity, in my opinion are quite useless in the treatment. They do good while the sufferer is resting, but the kidney comes down when the patient gets about again.

It has been painful to me to meet with many elderly women suffering from insomnia, headache, depression, dyspepsia, neuralgia, and constant ill-health, which might have been prevented years ago if the condition of the kidneys had been discovered. It is a common thing to meet with confirmed invalids of many years standing whose illness has been due to mobile kidney which has never been discovered, although many physicians and surgeons have been called in.

I recently saw a lady who had suffered from pain along the spine for more than twenty years. She consulted many eminent neurologists who diagnosed either spinal neuralgia or organic diseases of the spine. Just before I saw her a surgeon discovered that her right kidney was down, and cured the pain in the spine by means of a belt.

Many women have committed suicide or have been sent to asylums, who might have been saved had the condition of the kidneys been

discovered. In my own practice I can recall four cases of suicide, one patient while waiting for admission into a hospital drowned herself, three others whose parents would not allow them to be operated upon, or who had been frightened by friends about the operation, also drowned themselves. Another case had to be removed to an asylum because I was not supported by other medical men in my advice.

I have frequently met with movable kidney in children. In all of them periodical headache has been present, and I am inclined to think that in many cases the condition is hereditary and congenital. I have frequently found it running in families.

As a causation of movable kidney, of course, tumour of the kidney, calculi, &c., will cause the kidney to become movable. The wearing of tight corsets and the weight of the clothing when supported from the waist may both be causes of prolapse of the kidney. Of course, this cannot be the only cause, as movable kidney is found in men, children, and women, who have never worn corsets at all.

It is said that shoes with high heels produce it. Tall people are supposed to have movable kidney more than short people, but this is not so.

In many cases there has been a serious accident, often years ago, such as a fall from a bicycle or

a horse, or a fall from a distance, the kidney may appear to be displaced immediately by a strain, but this is scarcely possible. The kidney descends gradually, and the renal vessels are elongated. Landau quotes a case of a man who fell from a camel.

A lady recently consulted me for pain in the right side of the abdomen. She dated the pain to a definite time when she tried to pull down a window sash, she felt immediate pain in the right side of the abdomen, in the right iliac fossa and down the right leg, with faintness and headache on the right side of the head. The right kidney can be felt in the right iliac fossa, and it will have to be sutured up. In this case the right kidney was probably prolapsed before the strain, which caused an increase in the degree of displacement.

Lifting heavy weights will cause it, and any heavy work such as throwing carpets over a line to beat them.

A miner saw me a few days ago. He and a fellow workman were trying to tip a load of coal when they failed to do so, and he experienced a severe pain in the left side just under the costal arch. He has been unable to lift any weight since without severe pain in the same situation, in fact he has been obliged to give up his work. On examination I found that on inspiration the

left kidney could be distinctly felt and was exceedingly tender.

I recently saw a hay merchant suffering from abdominal pain. Part of his work was to test hay ricks. He had to push an iron instrument several feet long into a rick and then pull out a specimen of the hay. He told me it was often very heavy work. I found his right kidney was badly dropped and attributed it to his occupation.

It is a fact that a kidney may come down very gradually after an injury. A gentleman fell a distance through a trap door some years ago, since then his health has gradually declined, he complains of headaches and morbid fears, and a feeling that he does not walk straight. I have many times examined him for dropped kidney, and I was only able to feel the right kidney slightly displaced this year.

In health it is almost impossible to get the kidney outside the body. I have seen the violent efforts of surgeons to displace the kidney to examine it for stone; this displacement causes intense shock, whereas a mobile kidney will easily be pushed through the wound made for its fixation, and cause no shock even when brought outside the surface of the body.

An enlarged gall bladder, a parovarian or ovarian tumour, or a pancreatic cyst may simulate a movable kidney.

Sir Frederick Treves in the *Practioner*, 1905, writes an article on movable kidney. He says, "Conspicuous among the maladies of modern times is the curious condition known as movable kidney." He explains why it is not found on the post mortem table. He also states that he has never been called upon to seriously treat this condition in man.

His experience is, of course, not the same as mine. Men are frequently treated for movable kidney with serious symptoms, and are operated upon. Treves thinks that suturing of the kidney will become one of the rare operations of surgery. This will not be the case, for though the belt will often give great relief, in severe cases it entirely fails, and suturing of the kidney succeeds.

The success of the suturing entirely depends on the care of the surgeon who operates, and upon the operation performed. Goelet's is the operation to be recommended. Treves says that he has ordered three hundred trusses for his patients, and claims that the truss keeps a movable kidney from moving, and that it is all that an operation can do. I consider he is wrong here, for it is not only fixation that is produced by operation, but elevation, which straightens the ureter, and allows of free escape of urine. No kind of belt can ever fix the kidney like proper suturing, but if the kidney be sutured too low down, the

patient is in a worse condition than before. A truss, no doubt, may fix a kidney sufficiently to stop all pain, but it will not relieve the serious nervous symptoms which are very frequently present.

I have much pleasure in referring the reader to the interesting and highly valuable writings of Dr. Goelet, Professor of Gynæcology in the New York School of Medicine. He points out the causative relation of movable kidney in the production of female pelvic disease, also the fact that the right kidney, when down, presses on the right ovarian vein causing congestion of the ovary. He says "the profession at large is not proficient in the diagnostic palpation for the detection of movable kidney." Why? because they have not been taught the subject in the medical schools. Goelet says, "The palpation for movable kidney should be instituted as a routine measure in all gynæcological and neurological cases, and in those likewise who complain of chronic gastric disturbances." It is better to go further, and declare that every patient, man, woman, and child should be palpated for movable kidney; the palpation need not take more than one minute to perform. As to the causation of movable kidney, Goelet states "that childbearing, which weakens the abdominal walls, is a common cause of movable kidney. This cannot be

correct, for movable kidney is quite as common in women who have not had children as in those who have, and it is improbable that childbearing has much to do with it.

Goelet says pregnancy is a cause, and any wasting disease. It is very common in phthisis, and in any occupation which involves strain, *e.g.*, lifting weights, pulling, &c. Pulling is undoubtedly a cause. A cough will cause displaced kidney, whooping cough, cough of phthisis; sometimes the patient can feel during coughing painful descent and ascent of the kidney. In these cases a belt is frequently of great use in relieving pain. It is probable in these cases that the kidney has been out of place previously, but that strain has still further stretched the blood vessels and allowed of greater displacement.

Goelet gives an interesting list of the symptoms of movable kidney, which can be much enlarged. it is as follows:—

1.—Chronic digestive disturbances. It has already been pointed out that a movable right kidney will cause dilatation of the stomach. The great interference with digestion is shown by great emaciation in long standing cases of movable kidney, the patients often gaining three stone or more in weight after being operated upon.

Flatulence and pain after food are the chief symptoms.

Goelet says that the digestive disturbances are due to the movable right kidney dragging on the duodenum to which it is attached, and on the upper part of the ascending colon to which it is also attached.

2.—Unusual fatigue after walking or standing.

3.—Nervousness, restlessness, and insomnia.

4.—Palpitation of the heart, vertigo, and syncope.

5.—Epigastric pain often to the left of the medium line or over the heart. There may be local pain, or pain in various positions in the back.

6.—Dragging pain in one or both loins, often extending down the front of the thighs. Very frequently there is pain shooting down from the kidneys to the groins, simulating renal colic.

7.—Inability to rest comfortably in bed on the side opposite the kidney that is prolapsed.

8.—Irritability of the bladder, especially during the day time, but at night as well. This is very common in women.

9.—Transient attacks of jaundice. It is important to remember this symptom in distinguishing between movable kidney and gall stone.

10.—Pain in the region of the Vermiform appendix.

11.—Pain in the ovarian region on the same side as the prolapsed kidney.

12.—Acute attacks of severe abdominal pain like Dietl's Crises, which may occur on the commencement of menstruation, or at any time during the period.

Other symptoms and results of movable kidney may be added to above list, *e.g.* :—

1.—Neurasthenia, cerebral and spinal.

2.—Headaches, often very severe. They are cured when the kidney is supported by a belt or by operation.

3.—Mental symptoms, mental depression, hypochondriasis, melancholia, and mania, may be caused by movable kidney. Later on it will be seen that several cases of insanity have been cured by suturing up the kidney.

4.—Loss of memory is frequently caused by movable kidney.

5.—Neuralgia in various parts, either along the course of the ureter or in the spine from top to bottom or in the coccyx.

6.—Backache, usually on the side of the prolapsed kidney and over the normal situation of the kidney, is extremely common. Pain across the loins may be

caused by movable kidney and is frequently mistaken for lumbago, pain may occur between the shoulders and under the inferior angle of the right scapula. In the latter case often leading to a diagnosis of liver trouble.

Situation of the pains caused by movable kidney (see diagram).—In the case of left movable kidney, pain under the left costal arch is often very severe. The pain may be situated just under the left scapula.

7.—Albuminuria is very commonly caused by a movable kidney, which disappears when the kidney is supported. The albumen may be present in large quantities. Directly the kidney drops again the albumen re-appears in the urine.

8.—Postural Albuminuria. A paper was published somewhat recently on Postural Albuminuria. This, I think, may be due to dropped kidney.

9.—Colitis.

10.—Constipation or diarrhœa.

11.—Incontinence of urine in the day time. I have met with three or four children suffering from this disorder in whom I have found movable kidney, they have all been cured by belts. They all suffered with headaches.

12.—Sexual troubles. In several cases in women where the kidney has been badly dropped and has descended even into the true pelvis, there have been sexual delusions. In men seminal emissions and pain in the back on sexual intercourse have been cured by belts.

13.—Pain at the period and even acute mania at these times may be caused by a dropped right kidney. I was two or three years ago called to see the wife of a doctor who had had severe abdominal pains and delusions at each period. I found the right kidney movable, the doctor, who did not believe me at the time, afterwards told me he had checked the attacks by bandaging the abdomen with an india-rubber bandage.

14.—Hæmaturia and Pyuria may be due to movable kidney. It is important to remember the anatomy of the kidney and its relations to the ovarian and spermatic veins. When the right kidney is down it easily compresses these veins, obstructs them and causes Leucorrhea and pelvic pains and also effects the sexual organs.

15.—Profuse Leucorrhea produced in this way is at once cured by fixing the kidney.

16.—Loss of mental power, loss of energy, and even absolute loss of power of walking may be caused by movable kidney.

Goelet states that attacks of renal colic may be be due to twisting of the pedicle or bending of the ureter producing obstruction to the outflow of excreted urine. Goelet records a paper read at the annual meeting of the New York State Medical Association, at New York, in October, 1904, on "The Gynæcological importance of Prolapsed Kidney," printed in the Medical record of that month. He points out that the kidney when prolapsed, compresses the ovarian vein, and thus obstructs the return circulation from the pelvis, this compression is assisted by the construction at the waist, caused by corsets or weight of clothing. Compression of the ovarian vein may also occur when the kidney is prolapsed through the ureter, which is behind the vein, being bent and dragging upon it. It is certainly true that in almost every woman having prolapse of the kidney, there is some associated pelvic disease. The Gynæcologist should hence make a special point of recognising this condition or excluding it in making his diagnosis, and should as a matter of routine examine all his patients for this purpose, not once, but repeatedly if necessary. The frequency of prolapse of the kidney in women, especially in gynæcological patients, is

another cogent reason for thus examining every female patient and not considering the examination and diagnosis complete without it.

Goelet says in view of the importance of the kidney as an excretory organ, and with the knowledge that its function is seriously impaired by its prolapsed position, it is really a matter of surprise that it is so often disregarded or made light of. He says how otherwise sensible men can disregard this condition is truly astonishing. It is quite true that many of these patients exist with their kidneys out of place but they are more or less chronic invalids and their kidneys are diseased. We should ever bear in mind that the prolapse leads to the disease of the organ, owing to the continual interference with its circulation and function, and that from constant congestion a chronic inflammation results. This may remain in a quiescent state for a while but eventually causes atrophy of the organ. Hydronephrosis or pyonephrosis may result, with or without the presence of calculi in the kidney. It is fortunate that the kidney becomes replaced in the recumbent position at night, but during the greater part of the twenty-four hours, when the patient is up and about, the kidney must suffer, besides this, in consequence of its low position in the abdomen, it is constantly subjected to irrita-

tion and injury from compression of the distended colon to which it is attached.

Goelet for three years has had the urine of all patients going to him with prolapse of the kidneys examined microscopically. He finds that the majority (75 per cent.) show evidence of already existing inflammation of either the pelvis or of the urinary tubules.

He finds the patient is often given an erroneous idea of the gravity of the operation, as she has been told it is not altogether free from danger. He says, if I can do 197 consecutive nephropexies, in 47 of these fixing both kidneys at the same time successfully without mortality, any other painstaking surgeon should do as well, hence it cannot be said that this operation has any mortality.

Goelet has written another paper on the influence of prolapse of the kidney in disease of the female pelvic organs. This paper is well worth reading, giving many anatomical explanations of the symptoms of prolapsed kidneys. He remarks that the prolapsed kidney is frequently larger than normal from vascular engorgement, because traction upon the renal pedicle incident to prolapsed kidney, narrows the calibre of the renal vein by stretching it out, thus retarding the return circulation from the kidney.

It can easily be noticed how large a kidney, which is badly prolapsed, is, and how it becomes smaller when elevated by a belt.

Goelet describes the following conditions in the female, which are often produced by prolapse of the kidney.

Dysmenorrhea.

Profuse Leucorrhea.

Endometritis.

Ovaritis, &c.

Endometritis associated with prolapse of the kidney and depending upon it as a cause, explains the cases so often encountered that have been submitted to repeated curettage and remain uncured. "There are on record a number of these cases which have been finally cured by fixing the kidney."

Salpingitis has often been caused by prolapse of the kidneys.

Uterine displacements often result from increased weight of the uterine body, due to prolonged congestion, which weaken the supports, and hence may be brought about by prolapse of the kidney or by the right kidney falling into the pelvis.

Menorrhagia, Metrorrhagia, Hæmatoma, Hæmatocele, and Cystitis are sometimes due to prolapse of the kidney. Irritable bladder is frequent and

is usually present in 15 per cent. of prolapsed kidney cases.

Goelet in this paper notices recurring attacks of jaundice in cases of prolapsed kidney. He states that pain in the region of the appendix and in the ovarian region on the same side as the displaced kidney is not uncommon.

It is due to the fact that the history of the health of patients is so frequently badly elicited, that prolapsed kidney is supposed to be of little account, if the examiner is familiar with the symptoms and looks for them he will find them. This paper of Goelet's is printed in the journal of the American Medical Association, August, 1902.

Attacks of colic resembling those caused by renal calculi may be caused by movable kidney.

Hematuria may also be caused by movable kidney.

In the diagnosis of movable kidney, Goelet states that it should be looked for in all cases, and palpation of the kidney is the only certain method ; repeated palpation is sometimes necessary. The kidney may remain in place at times and be prolapsed at others. It is necessary in some cases to make the patient take a long walk, the fatigue of which causes the abdominal muscles to relax, when the kidney may frequently be felt.

Goelet describes conditions that may interfere with palpation and detection of a prolapsed kidney :—

1.—Distention of the colon.

2.—Unusual rigidity of the abdominal wall, often due to nervousness.

Differential diagnosis of movable kidney.

Movable kidney is to be distinguished from :—

1.—A distended gall-bladder.

2.—Tumours of the pylorus.

3.—Tumours of the omentum.

4.—Growths in the intestines.

5.—Impacted fæces.

6.—A tongue shaped lobe of the liver.

7.—A pancreatic cyst.

The chief characteristic of prolapsed kidney is the facility with which it may be replaced, especially when the patient is in a recumbent position, but this is also true when the patient is standing, the characteristic slip upwards on pressure is diagnostic. An enlarged gall bladder moves from side to side and with respiration, but it cannot be made to disappear backwards, and when pushed upwards has not the characteristic slip of the kidney; a kidney is easily pushed upwards and backwards; tumours of the gall bladder can be displaced only upwards.

Goelet says that the advice sometimes given to women with prolapsed kidney, by those who

have not carefully investigated the subject, that rest, recumbency, belts, and putting on flesh will eventually restore the natural support of the kidney, is like advising women with uterine fibroids to wait for the menopause. He regrets that there are still some Rip Van Winkles in the profession. The kidney once prolapsed will remain so, unless fixed by operation; moreover, there is a tendency to exaggeration of the degree of the prolapse, and structural disease of the organ will result if it is disregarded.

Goelet describes his operation for fixation of movable kidney (Nephropexy).* A proper preparation for the operation is essential to success, such as, rest in bed for a day or two before the operation, relief of constipation, flatulence, etc., and a careful regulation of the hepatic functions. He lays great stress upon the removal of all fat around the kidney, and the detachment of the kidney from the duodenum and colon, he gives a list of causes of failure after nephropexy as follows:—

1.—Delay in operating until the kidney has become seriously disabled.

2.—Failure to detach completely the fatty capsule, for unless this detachment is complete, there will still be dragging on the kidney.

* See method of Suturing the Prolapsed Kidney, by Augustus H. Goelet, M.D., printed in full in the appendix.

3.—Excessive vomiting or coughing shortly after the operation may loosen the kidney.

4.—Attachment of the kidney too low down may permanently cripple its function and inevitably lead to further trouble.

Considering that gynæcologists are allowed to open the abdomen and in an enormous number of cases, even for diagnosis alone, and to remove organs not vital to life, the operation having a definite mortality, the way in which objections are raised to the operation of nephropexy is perfectly childish. In nephropexy there is no mortality, the abdomen is not opened, and the organ to be fixed, not removed, is not a vital one.

It is quite true that many of these patients exist for years with their kidneys out of place, but they are more or less chronic invalids, and their kidneys are diseased. We should ever bear in mind that the prolapse leads to disease of the organ, owing to the continual interference with its circulation and function, and that from constant congestion a chronic inflammation results that may remain in a quiescent or mild state for a while, but eventually atrophy of the organ, or hydro-nephrosis, or pyo-nephrosis may result.

We should not forget also that flexure of the ureter permits accumulation of the urine in the pelvis and consequent distention, with pressure

upon the secreting structure of the organ and arrest of function.

If others could see these kidneys, as the surgeon does, exposed on the operating table, there would be less hesitancy in advising operation for correction of the displacement when it is discovered, and the operation would be more uniformly successful in affording relief. The operation would not be then, as is so often the case now, postponed until structural disease of the kidney has occurred, which may, perhaps, be incurable.

Dr. Noble (Gynæcological surgeon) of Philadelphia a little time ago sent me a pamphlet on six cases, all of severe Hæmaturia. He has written on the subject of movable kidney, and he makes some interesting remarks upon the rest cure, he has had the rest cure strictly carried out in many cases of movable kidney, and of a modified rest cure in a number of other cases, the results obtained were not satisfactory, the nervous symptoms disappeared for a time during and after the rest cure, but in every case they have returned to a greater or lesser extent. The results have been equally disappointing as to improvement in the degree of mobility of the kidney. He says "I am convinced from the experience I have had, that the rest cure will be a source of disappointment if used with the idea of curing any marked case of mobile kidney, it will improve

the general health but will not markedly improve the local condition."

Dr. Noble states that the object of his paper (*Gaillard's Medical Journal*) is to emphasize the great frequency of the condition, and the ease with which it can be diagnosed, also to urge on those, who have not done so, to study its relation on the reflex and nervous symptoms met with in women.

Dr. Bramwell, of Cheltenham, has written a paper on a case of dilatation of the stomach which proved fatal. This paper was read at the annual meeting of the British Medical Association, July, 1901, held at Cheltenham. He states that at the post mortem examination, before anything was removed from the abdomen, it was distinctly seen how the descent of the kidney tightened and dragged upon the peritoneal covering of the pylorus. The patient was a widow, aged forty-nine. For twenty-nine years she had suffered from attacks of severe dyspepsia; she was less troubled with these attacks during pregnancy. The attacks were always more or less sudden in their onset, of an acute character, with pain and uneasiness in the epigastrium, and a feeling of great distention, which was not relieved until vomiting had occurred. The most rigid dieting and careful general hygiene failed to prevent their recurrence. The severity and duration of

the attacks was distinctly influenced by the fact whether she gave in at once and went to bed, or whether she continued her work. Dr. Bramwell discovered a freely movable kidney on the right side. A pad was used to keep the right kidney up, and some benefit was derived. Later on she got worse and vomited blood. The stomach became more and more dilated, and she died suddenly from syncope owing to sudden excessive dilatation of the stomach.

This case of Dr. Bramwell's is a most important one. It proves that dilatation of the stomach is caused by movable right kidney, and it shows how a movable right kidney may kill. Vomiting of blood occurred. This supports my opinion that ulceration of the stomach may be produced by a movable right kidney dragging on the pylorus and causing intermittent stenosis of the pyloric orifice, the stenosis being relieved by rest in bed at night, but preventing the proper emptying of the stomach.

A few months ago I was called in to see a case of severe hæmatemesis in a woman. On carefully palpating the abdomen I felt a very large movable right kidney. I recommended gastro-duodenostomy, which operation saved the patient's life. Dr. Bramwell's patient evidently had suffered from early life from a movable right kidney. No doubt as a widow she had to do

a great deal of work, hence the attacks. The condition of the kidney was too long overlooked and never treated. An operation years before would have saved her from such pitiable health, and very probably have saved her life.

Dr. Pratt, of Leicester, has kindly given me his experience of movable kidney. About two years ago I met him in Leicester. I found he was deeply interested in the subject of movable kidney. He frequently met with Dietl's crises (which occur after exertion), and with the attacks of pain and collapse at the period, which are caused by movable kidney. He also told me how frequently he found movable right kidney simulating appendicitis. In one of his cases a gentleman had very severe attacks of pain in the right iliac fossa, so severe that Dr. Pratt would have operated for appendicitis but for the fact that he had already removed the appendix. Dr. Pratt gave me a very valuable hint in the treatment of sudden attacks of pain caused by movable kidney.

The patient should, of course, be kept in bed, but in addition the head should be kept lowered, no pillow being allowed, and the foot of the bed should be raised six or seven inches by blocks of wood under the two lower bed posts.

Dr. Newman, of Glasgow, has done very valuable work on the subject of movable kidney.

Arbuthnot Lane has published a pamphlet on the operative treatment of chronic constipation. The Medical Publishing Company, Limited, London, 1904. In this pamphlet he points out how in chronic constipation it is the cæcum and ascending colon which are overloaded. The excessive distention of this portion of the intestinal tract results very largely from the erect or sedentary posture habitually assumed during the greater part of the twenty-four hours in civilized communities. This is exaggerated in the woman by the constriction of the waist, and in both sexes by the imperfect development of the muscles in the abdominal wall. In the act of defæcation in our present state of civilization, the cæcum is driven downward and forward into the true pelvis, tending to drag and displace downwards the right kidney, the individual losing in the sedentary position the enormous pressure afforded by the forcible apposition of the thigh to the abdomen which is exerted when the squatting position of uncivilised life is assumed. Not only does this squatting posture help to empty the cæcum and ascending colon, but it tends to retain, both directly and indirectly, the kidney in its normal position, Arbuthnot Lane states that in a large proportion of cases of chronic constipation, the kidneys are mobile. One factor in the causation of movable kidney is

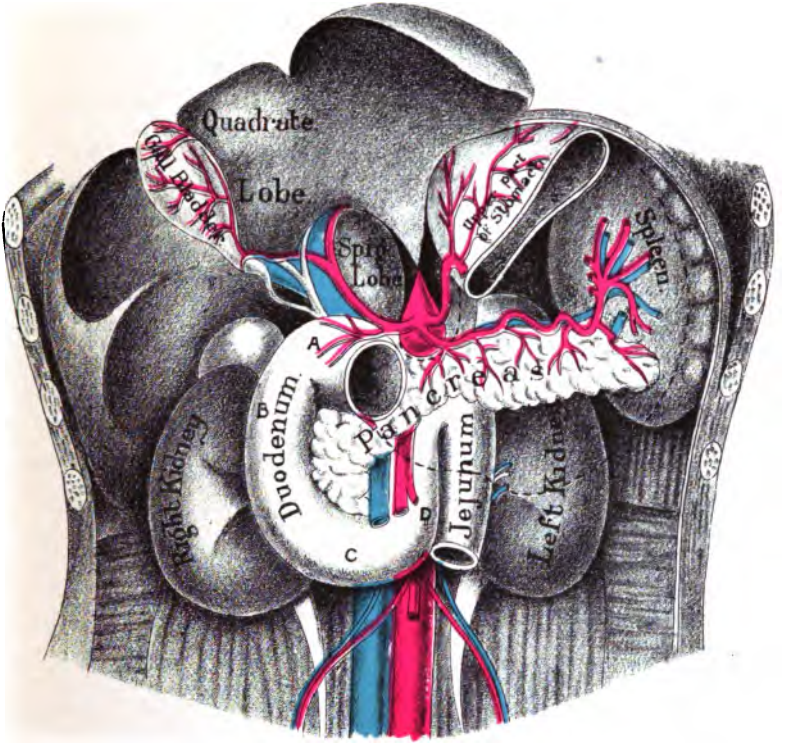
the strain exerted upon the kidney by the ascending colon and cæcum, or by the transverse colon at the splenic flexure, and as the drag exerted on the right kidney is much greater than that on the left, the mobility of the right kidney is correspondingly greater.

Constipation, of course, of a chronic nature is probably a cause of movable kidney, and I believe Arbuthnot Lane to be quite correct in his pamphlet. It has been known for many years that women suffer from chronic constipation far more frequently than men do, and this fact (which can easily be explained, probably accounts in some degree for the greater frequency of movable kidney in women.

CHAPTER II.

The Normal Kidney.

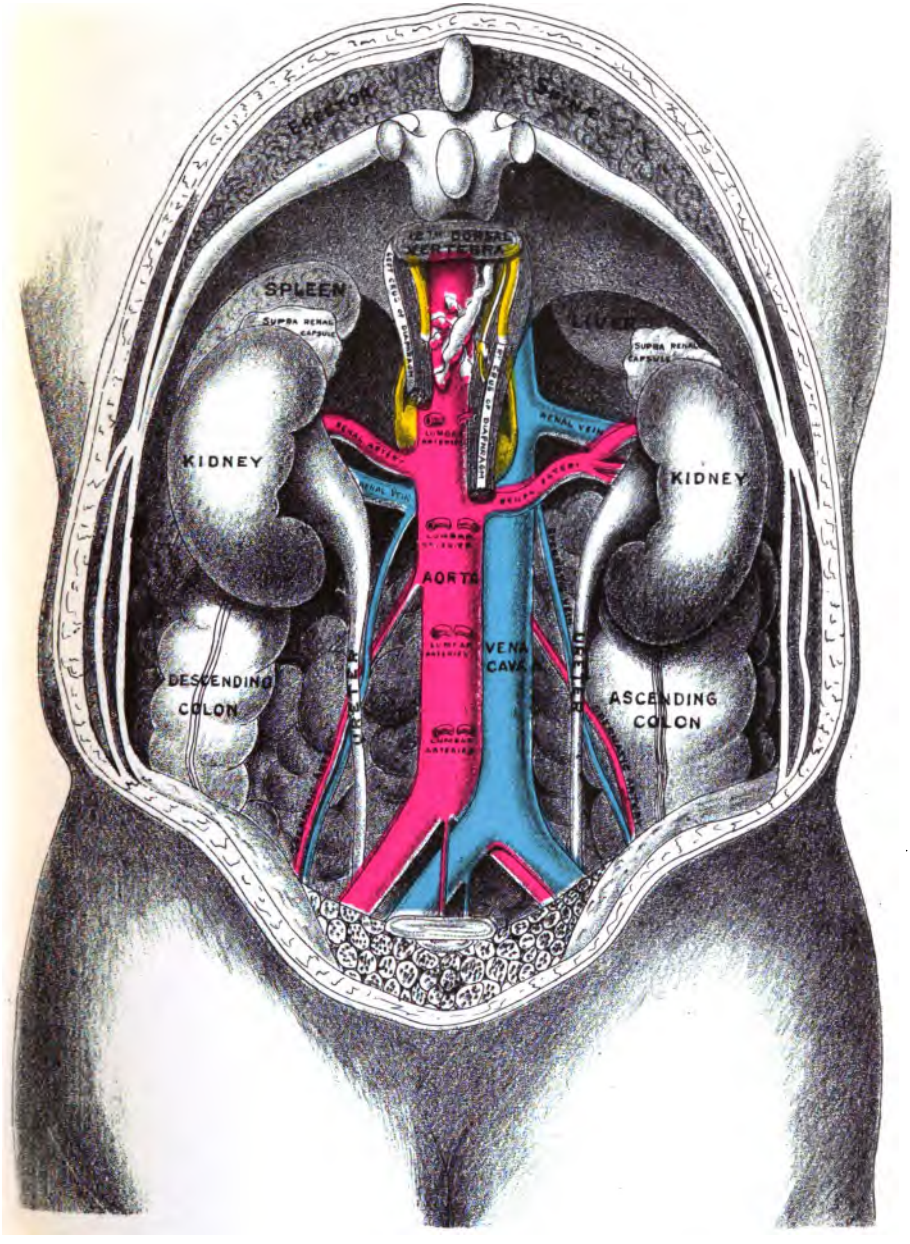
The kidneys, two in number, are situated in the back of the abdomen. They are placed one on each side of the spine, behind the peritoneum and amidst a mass of fat and areolar tissue. The upper end of the kidney is on a level with the upper border of the twelfth dorsal vertebra. The right kidney is a little lower than the left. Each kidney is about four inches long, two and a half inches broad, and about an inch thick. The kidney weighs, in the adult male, from four to six ounces, in the adult female from four to five ounces. The anterior surface of the kidney is partially covered by peritoneum. The right kidney in its upper two-thirds is in contact with the posterior portion of the under surface of the right lobe of the liver; being lodged in a concavity, the *impressio renalis*, on its inner border it is covered by the second part of the duodenum, while its lower and outer portion is in contact with the hepatic flexure of the colon. Consider how this right kidney when dropped will disturb the liver, the duodenum and stomach, and the colon. The kidney is attached to the duodenum and the colon by connective tissue. The left



Anterior view of the kidneys. The duodenum is seen resting upon the right kidney, to which it is attached. When the kidney falls the duodenum is dragged down with it. *(Gray.)*

kidney is covered by the posterior surface of the stomach above, below by the pancreas, near its outer border the anterior surface lies behind the spleen and the splenic flexure of the colon; when the left kidney falls the spleen falls also to some extent. The posterior surface of the kidney is flatter than the anterior. It is entirely free from peritoneal covering, and is embedded in areolar and fatty tissue. It lies upon the diaphragm, the external and internal arcuate ligaments, the anterior layer of the lumbar aponeurosis, the psoas and transversalis muscles, one or two lumbar arteries, the last dorsal, the ilio-hypogastric and ilio-inguinal nerves. The right kidney rests on the twelfth rib, the left on the eleventh and twelfth. The right renal vein is shorter than the left, being only about one inch in length, so great care must be used in operations on the right kidney so as not to tear the vein or to cause clotting in the Inferior Vena Cava or iliac veins. The kidneys are freely supplied with nerves from the Solar plexus and Aortic plexus. They communicate with the spermatic plexus, which may explain the occurrence of pain in the testicle in Movable Kidney. The right spermatic vein opens into the Inferior Vena Cava at an acute angle; on the left side it opens into the left renal vein at a right angle. The ovarian veins are analagous to the spermatic

veins in the male and terminate in the same way. The relation of the ovarian or spermatic veins to the left renal vein and the pressure caused by a dropped right kidney on the veins on the right side account for the ovarian and uterine trouble so often present in prolapsed kidney, and for the sexual trouble met with in men when the kidneys are dropped. A right dropped kidney may compress the veins from the vermiform appendix which join the Superior Mesenteric Vein, and it is this fact that probably explains pain in the appendicular region in cases of movable right kidney which has led to so many operations for supposed appendicitis The kidneys (Gray's Anatomy, 1901) being situated at the back of the abdominal cavity and deeply placed, cannot be felt unless "enlarged or out of place." This is absolutely true. When the patient is standing and the kidney can be made to "slip up" by pressure of the fingers that kidney is mobile, movable, prolapsed, dropped,loose, or in a condition of nephroptosis, and is a great danger. The ureters are the two tubes which carry the urine from the kidneys into the bladder. They commence in the kidneys by a number of branches which unite and form a pouch, the pelvis of the ureter. This pelvis is opposite the spinous process of the first lumbar vertebra, and it is accessible behind the peritoneum. When



Posterior view of the kidneys and ureters in the normal position. The colon can be seen on each side, and is attached to the kidneys. *(Gray.)*

the kidneys become mobile they do not carry with them the supra-renal bodies. The kidneys are mainly kept in position by fatty matter and connective tissue, the tunica adiposa or fatty capsule, and by the perinephric fascia. The kidney moves a little during inspiration and expiration, but this cannot be felt by the hand when applied externally. It is probable that rapid emaciation and loss of fat around the kidneys may cause it to fall, but no amount of fattening afterwards will keep it up.

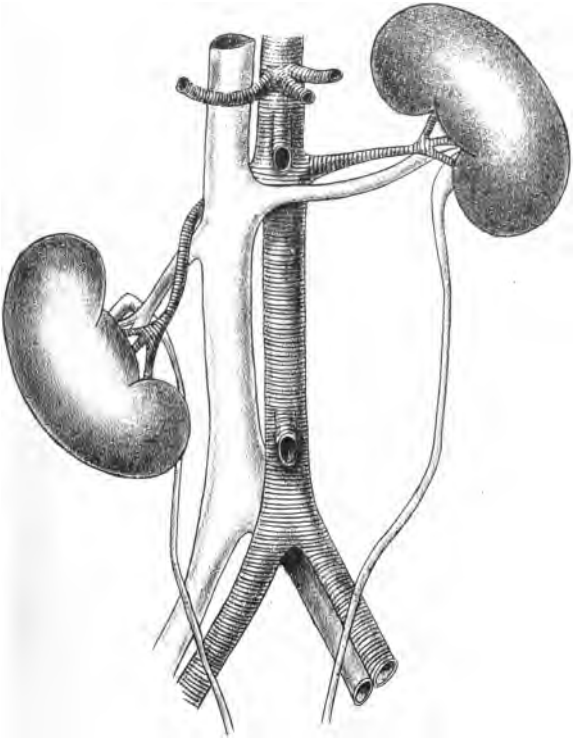
CHAPTER III.

Movable Kidney.

Ever since I have been in practice I have made it a rule to thoroughly examine each patient who comes to me, that is, to examine not only the part complained of, but the body generally; and, in the case of women, I have always insisted on the necessity of the corsets being removed, and of an examination of the abdomen. Through doing this I have come across hundreds of cases of movable kidney. It is, however, only during the last twelve years that I have realised the great importance of the subject. I have already considered the works of Landau, Henry Morris, Goelet, Sir William Roberts, and others on the subject of movable kidney.

What a ridiculous term for dropped or movable kidney is that of "floating" kidney, as if a solid heavy organ could ever float. Of course it does not float, either in the recumbent or in the erect position, and the term should not be used at all. It is generally applied to a kidney which can be moved very freely in the abdomen.

What is meant by movable kidney? A kidney is movable which can be grasped by the hand, felt below the ribs, and made to slip up by the



(Landau, 1884.) This diagram shows a dropped right kidney with kinked ureter.

hand. The term "dropped" is even better than the term movable, for the kidney is displaced from its cavity and drops when the patient assumes the erect position.

In rare cases the kidney is better felt in the recumbent position. I think this is due to the more relaxed condition of the abdominal muscles obtained by lying down.

How is it that movable kidney is so frequently overlooked? I believe this arises from a want of knowledge of its frequency, of its importance, and of the proper way to examine for it. Thousands of women are in bad health and unable to perform their duties in life, suffering from nervous exhaustion, owing to movable kidney. When they seek medical advice they are often not requested to remove their corsets.

How is it that when movable kidney is found very little importance is attached to it? I think this is because the symptoms at present are not generally known. Belts ordered for the condition sometimes fail to relieve.

The usual procedure is to send the sufferer to the surgical instrument maker to procure a belt, but no examination of the patient afterwards is made to ascertain if the belt supports the kidney or not. The matter is left to instrument makers, who are quite incompetent to judge of

the efficacy of a belt. In the majority of cases the belts have failed, and so the subject of movable kidney has been in disrepute.

Frequency of Movable Kidney.

A gynæcologist, Dr. Goelet, found among his out-patients that movable kidney existed in thirty-three per cent. of them, these cases being taken at random. As a neurologist I found that about forty per cent. of the women and about six per cent. of the men who came for the relief of nervous disorders had movable kidney. I cannot say what the percentage is among the patients of other specialists. I have no doubt that every general practitioner in the kingdom has cases of movable kidney among his patients.

Can the kidney be felt in the normal condition? I say positively it cannot. I have examined in the erect position over fourteen thousand private patients, to whom I could give plenty of time for a thorough examination. Whenever I felt the kidneys they were out of place, and could be made to slip up. This slipping up of the kidney when pressed by the fingers is diagnostic of its mobility and of its abnormal or "dropped" condition. No practitioner need trouble his head that he can feel a kidney in its normal place. He may mistake a dropped kidney for tumour,

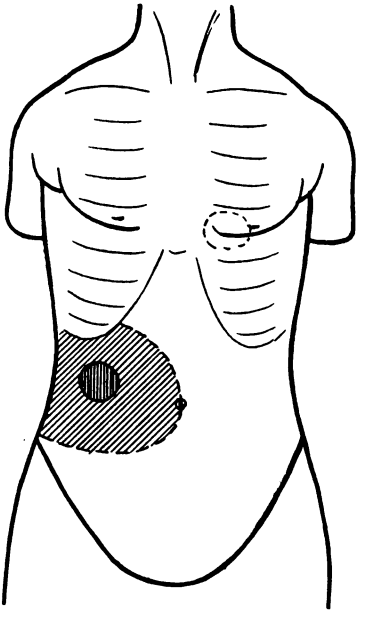


Figure showing dropped right kidney and its range of mobility.—Roberts, 1885.

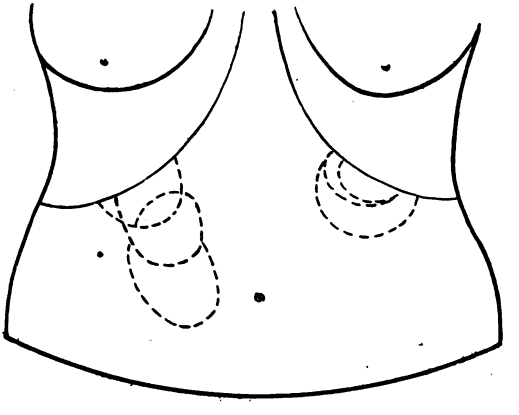


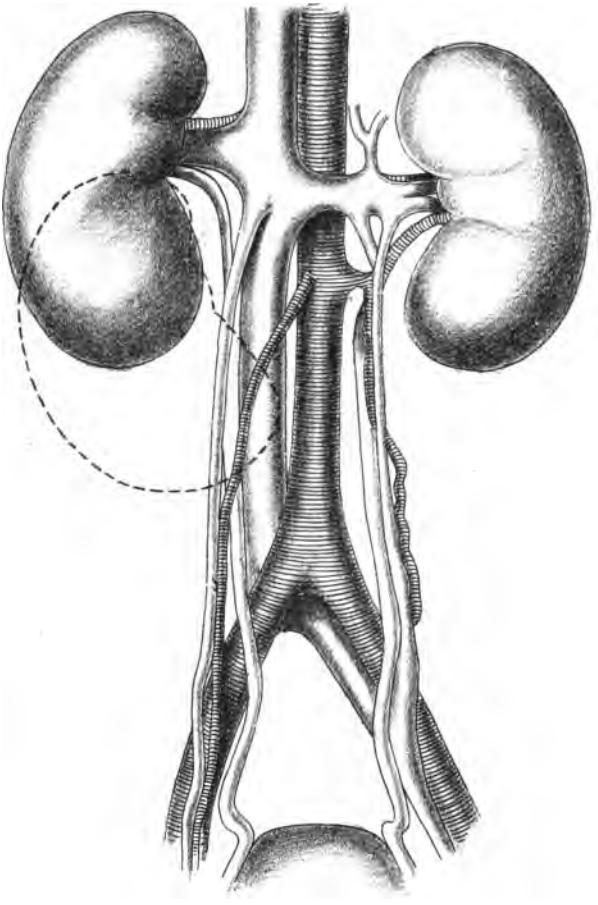
Figure showing dropped right and left kidney.—Roberts, 1885.

such as a cyst in the head of the pancreas, a tongue shaped lobe of the liver, &c. But let him feel the slip upwards of the "dropped" kidney, and he is safe in his diagnosis. There are thousands of medical men who cannot feel a well-marked prolapsed kidney and many who have never heard of it. Few have thought of what it means:—A vital organ dropped, the ureter falling also from its vertical position, the escape of the urine being impeded or prevented, and auto-intoxication from retained urine, producing all kinds of nervous disorders. Moreover, the mechanical pressure of the dropped kidney on other organs has to be considered. What cases of movable kidney go to a consulting surgeon? Only those who have pain, or a supposed tumour, are sent by the general practitioner for operation.

How to diagnose Movable Kidney.

The diagnosis can only be made by palpation of the abdomen. The abdomen should be uncovered and the patient should be standing. To feel the right kidney, the right hand should be placed on the abdomen, the thumb being under the last rib at the back and the fingers in front below the costal margin. The kidney, if prolapsed, may be felt with slight pressure of the fingers to be down; but if not, when the patient draws a deep breath the kidney will slip into

the fingers, and can be slipped back easily. A common mistake is to palpate the abdomen with the flat of the hand; this simply pushes the kidney in front of the hand. The best way is to get the kidney between the thumb and fingers, and not to press too heavily so that it cannot come down. When the patient assumes a sitting or standing position the kidney comes down more than it does during inspiration when lying down, and it is always necessary before concluding that the kidney is not movable to examine the patient sitting or standing. In these two positions the patient should lean forward and try to relax the muscles. To illustrate the importance of this, some years ago I sent a woman, who had a movable kidney and was unable to do her work, to a surgeon to be operated upon. The surgeon could not find the kidney when she was put under an anæsthetic; he sent for me the following day to examine the patient again. I could not find the kidney while she was lying on her back, but when I asked her to stand up it could at once be felt in the right iliac fossa. In examining the left kidney the left arm should be placed round the body, the physician standing on the right side of the patient, the fingers of the left-hand being placed under the last rib, the right hand should be placed under the left costal margin; on drawing



(After Goelet) Showing, by the dotted outline, dropping of the right kidney on to the spermatic or ovarian vein and inferior cava.

the breath, or on sitting or standing, if the kidney be movable, it will be felt between the fingers and can be made to slip up in a most characteristic way. The left kidney rarely falls to the same degree as the right. I have seldom met with it falling below the umbilicus, while the right kidney frequently falls into the iliac fossa and even into the true pelvis.

It is remarkable that the left kidney feels much smaller than the right.

In the case of the right kidney there is frequently little or no pain, but often on walking or standing or sitting there is an uneasy feeling in the back on the right side. In the case of the left kidney, pain is often the most prominent symptom and is very severe, the pain disappears when the patient is lying down and comes on whenever she sits, stands, or walks. The pain then is under the left costal margin, running round the left side. I have have had at least a dozen cases where this pain had been present for a long time, and was removed immediately by the use of the belt.

CHAPTER IV.

Symptoms of Movable Kidney.

Movable right kidney may disturb the liver and cause aching under the right shoulder, tenderness of the liver, with bile in the urine and attacks simulating those of gallstone colic. A lady had been ill for some years with attacks of acute pain in the region of the gall-bladder, followed by the presence of bile in the urine; she was greatly depressed and suffered severely. The gall-bladder was opened but no gall-stones found; she still had attacks, when the right kidney was found to be dropped. This was stitched up and the patient was quite cured; she had been considered a confirmed invalid and hypochondriac.

Colic.

In some cases severe attacks of abdominal pain may be caused by movable kidney. The following case is instructive. A lady, always delicate, had been unable to walk properly for some years, that is, she was fatigued very easily. For some months violent attacks of colic came on at each period, each attack was so severe that it seemed likely to

prove fatal; they were accompanied by faintness and vomiting, which lasted nearly twelve hours. Every precaution was taken in the way of rest and other treatment without avail. It was found the right kidney was dropped into the right iliac fossa; the kidney was kept in place by a belt, and no further attack occurred. Moreover, the patient was able to walk about and to stand in church, which she had not been able to do for several years.

Symptoms of Movable Kidney.

Insanity, either in the form of melancholia, hypochondriasis, mania, or delusional insanity, is by far the most important of the ailments due to movable kidney. *The cases related later on conclusively prove that if a patient is insane and a movable kidney exists that patient should be operated upon at once.* It has been said that it is not the suturing up of the kidney that cures these cases, but the injury inflicted, the incision I suppose. If this is so, why do not those people who hold this view have an incision made in insane people to prove the value of their opinion. I do not know whether the cure of insanity by suturing up the kidney has ever been done before, but there is now no doubt about its efficacy. I consider that before women are sent to an asylum, in all cases the presence of movable kidney

should be excluded, and that no woman should be sent to an asylum if this be found, but should be operated upon. I can not only give records of several cases of insanity cured by operation, but I can relate the cases of three patients who committed suicide either because the parents or friends objected to the operation, or from delay in operating.

A few years ago I had a sad case of hypochondriasis with a movable kidney. The woman suffered also from severe headaches. I recommended an operation as a belt failed. This procedure was prevented by friends and others. The hypochondriasis passed into melancholia and she is now in an asylum. This patient for years tried various methods of cure, the Weir Mitchell treatment, the rest treatment, hydropathy, electricity, etc., without any good result. In many cases of movable kidney although there may not be downright insanity yet there is much depression and the sufferers are very miserable, being afraid of something dreadful happening to them. I have observed these symptoms not only in women but in men also. I have met with several cases in young men where the main symptoms have been inability to continue at their work, suffering from lassitude and exhaustion. Frequently there is loss of memory and headache. These young men suffer greatly from

mental depression and are often suicidal. The kidneys, one or both, are found to be movable, and the patient is cured by an operation. A belt gives relief in such cases, but I believe it far better to have the kidney sewn up at once. I have no doubt that many a career has been spoiled by movable kidney. I believe that insanity and other nervous affections are due to auto-intoxication, the urine in the dropped kidney and ureter being retained and decomposing.

Complete removal of one kidney does not produce the symptoms of movable kidney.

HEADACHE.—The close relation between headache and movable kidney is very marked. In a case of headache with movable kidney, a belt which supports the kidney removes the headache and in severe cases where an operation is performed, the immediate cessation of headache is remarkable. Illustration of this will be found in a perusal of the cases operated upon. Can this headache be distinguished from the headache of migraine? I do not think so. In migraine where there is no apparent movable kidney it is possible that the kidneys are at fault, although they cannot be felt out of place. I recently saw a gentleman who I had attended some years ago for typical migraine. He brought his daughter for examination. I found she had migraine and movable left kidney. He then brought his son to

me, who had headaches and movable right kidney. This young man was fond of athletic sports, but was always exhausted after them. He could not work and complained of always being tired. He was also very depressed.

In one case of very severe headache the patient was quite cured by suturing up the right kidney. She however took influenza and pneumonia, and the severe cough rendered the kidney again mobile. When she got about the terrible headaches returned. A second operation was performed; the kidney was found mobile and was stitched up again. She is now much better, if not well.

Migraine I consider such a dreadful complaint that in all severe cases, if the patient is otherwise healthy and the kidney down, an operation should be performed.

I can almost always safely diagnose headaches in men if I find the kidneys mobile. The same is the case in children and women. Of course, in all cases of headache care must be taken to exclude all organic diseases; the *fundus oculi* must be examined, also the urine. The symptoms of movable kidney resemble very much those of chronic Bright's disease, headaches, dyspepsia, and mental symptoms occurring in both.

Difficulty in walking is a very common symptom of movable kidney. If the right kidney

is down it is sometimes impossible for the patient to raise the right leg; if both are down the patient may be paraplegic with loss of the patellar tendon reflexes. This paralysis is due to neuritis of the lumbar plexus caused by longstanding pressure by the prolapsed kidneys.

DEGREES OF MOBILITY.—The kidney may be felt at one time and not at another. Jumping, coughing, and exertion till fatigue ensues will usually bring down a mobile kidney. Only the lower border may be felt or one fourth or one half of the kidney, but the characteristic slip upward of it on pressure is diagnostic. In other cases the whole of the kidney can easily be felt with its hilum. In other cases the kidney may descend into the iliac fossa, and in rare cases the kidney may descend right into the true pelvis, so that it cannot be felt at all. In the case of a young lady in whom I had found a well marked movable right kidney several years before, when asked again to examine her I could not find the kidney and I was afraid that I had been wrong in my previous diagnosis. I asked her to walk about and to see me the next day. I could then feel the upper extremity of the right kidney which was in the pelvis. With a little stroking upward the kidney was moved up and could be pushed under the ribs. The kidney being actually in the pelvis is probably one cause of the irrita-

bility often present in the bladder and of sexual delusions.

I have several times found the right kidney down in the pelvis on the right side. It evidently must compress and displace the uterus and the ovary. In these cases sexual delusions have been present. At the time of operation when the kidney is pulled up a large cavity is found so large that the whole hand might easily be passed down into the pelvis without disturbing anything. External pressure with a pad over this cavity is useful. In men I have very rarely found a kidney which has dropped as far as the pelvis.

A kidney may be quite mobile though it cannot be felt below the ribs. This is shown by the case of a young man to whom I recommended a belt for movable right kidney. The belt did him good, it relieved the lassitude, want of energy, backache, and headaches, and the kidney could not be felt, what more could a belt do? He allowed he was better but said he was not quite well and preferred an operation. This was done, the kidney was freely mobile, or, as sometimes called, a "cinder-shifting kidney" and the operation completely cured the patient. It is in this way by noting the results of supporting the kidneys by belts that I have been led in severe cases to recommend suturing up of the kidneys. In stout people it is often impossible to feel a movable

kidney though they do suffer from it. There does not always exist a relation between the degree of mobility of a kidney and the severity of the symptoms it causes. I think that where the kidney is very movable, digestive disturbances and disorders of the pelvic organs are more common, and where it is not so mobile disorders of the nervous system are more marked. Anyway a kidney only slightly mobile may cause very severe symptoms. It must be remembered that while the mobility may appear to be very slight on external examination, at an operation the mobility of the organ will be found to be much greater than was expected.

In some people it is impossible to detect a movable kidney, *e.g.*, in very stout people, and in very nervous people, who make their abdominal muscles very rigid. It is of little use to give an anæsthetic in these cases, for the kidney most probably would not be felt in the recumbent position, and it would not be safe to raise the patient to a standing position. The best thing to do is to tire them out by exertion, and after repeated examination the kidney will be felt if it is movable.

NEURASTHENIA, GENERAL WEAKNESS, PHYSICAL AND MENTAL FAILURE are very commonly due to movable kidney. The sufferer is always tired, and cannot stand long or walk far, in fact it is most

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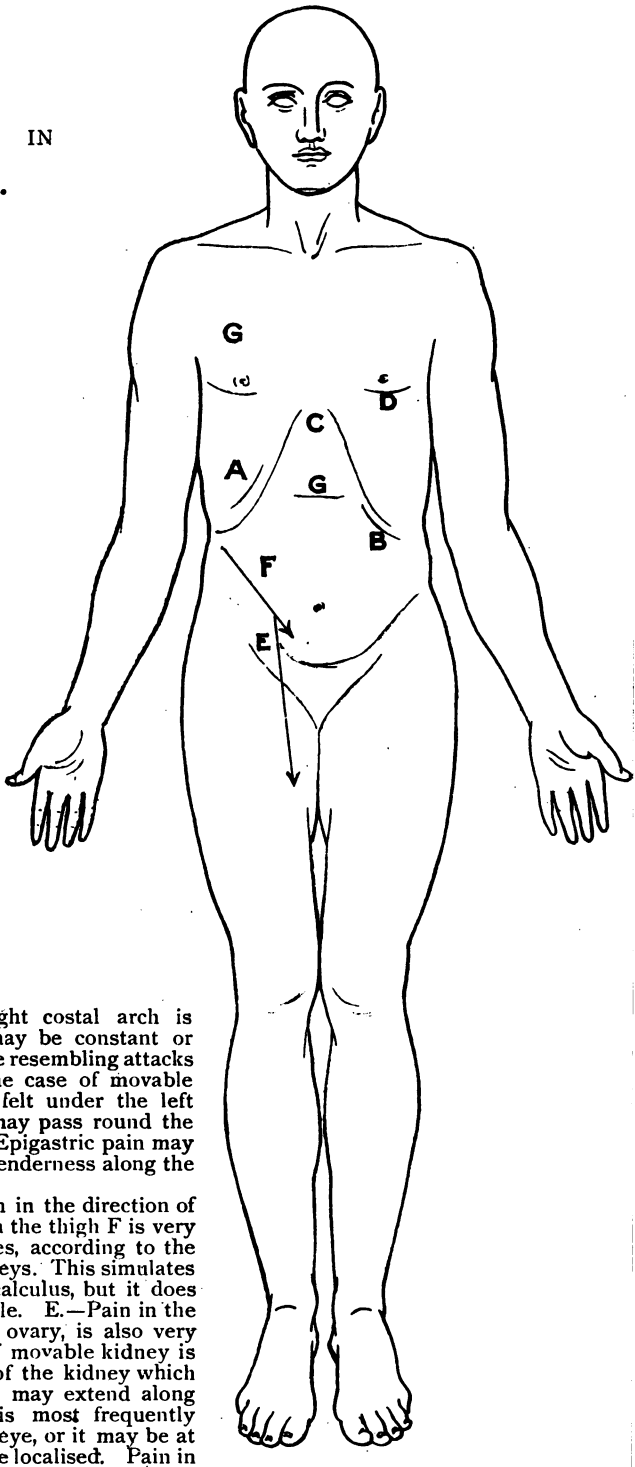
noticeable that people with movable kidney cannot walk well and that when doing so suffer from backache, and this tiredness is the most common symptom of movable kidney. The fact that the patient is all right lying down is almost diagnostic of movable kidney. In rare cases there is marked ataxia. Vertigo and morbid fears may be present. People with movable kidney usually stoop, and they experience a difficulty in standing upright and feel a dragging sensation in the abdomen.

In some cases a sense of difficulty in getting a deep breath is present, the patient complaining of a difficulty in getting a deep inspiration, and referring the situation of the sensation to the region of the ensiform cartilage.

Pain may be absent in Movable Kidney or it may be very severe.—The pain may be in the region of the kidney, it may shoot downward and upward in the direction of the ureter, or it may shoot across the abdomen. It is often in the back and may be taken for lumbago, spinal neuralgia, or coccydynia. The pain may extend down the front of the thigh. The pain may be paroxysmal and very severe in the form of Dietl's crises or may occur at the commencement of the period, or during it if the patient exerts herself too much. It may be round the right side and simulate attacks of gall stone.

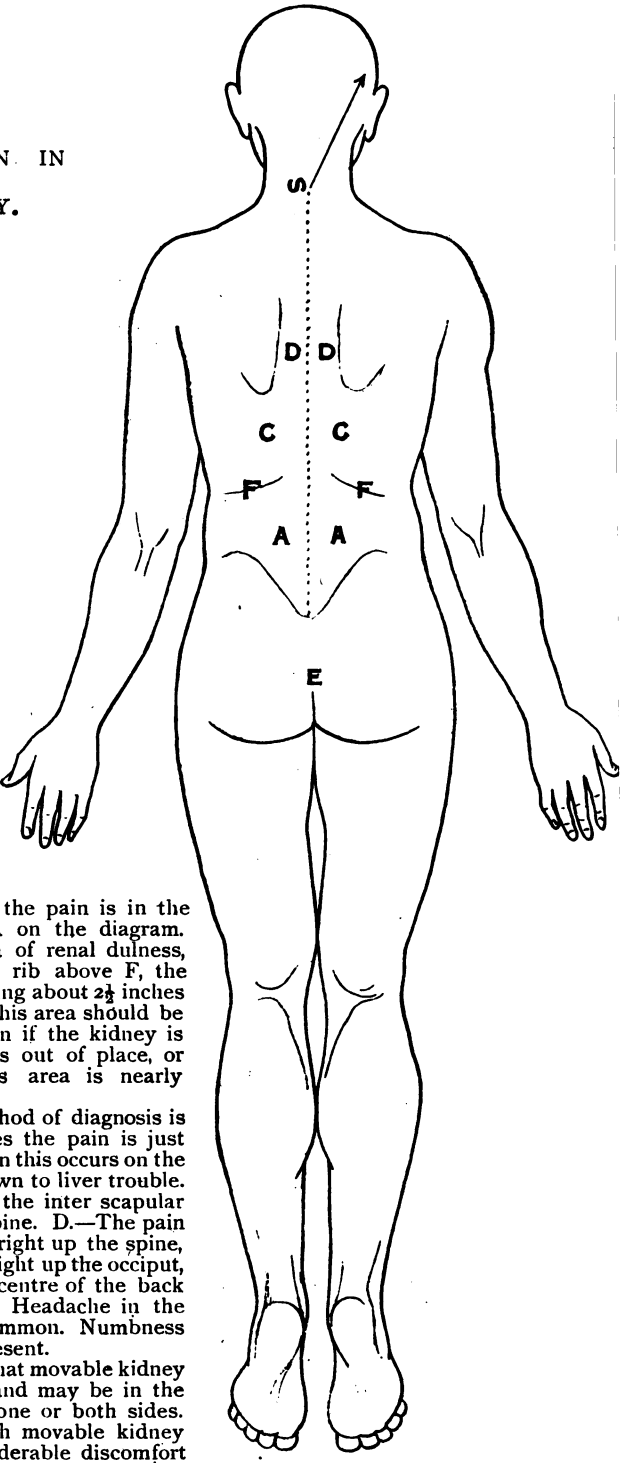
Situation of Pain in Movable Kidney.



A.—Pain round the right costal arch is commonly met with. It may be constant or paroxysmal, in the latter case resembling attacks of biliary colic. B.—In the case of movable left kidney severe pain is felt under the left costal arch, and this pain may pass round the body on the left side. C.—Epigastric pain may be present with pain, and tenderness along the abdominal aorta.

F.—Pain shooting down in the direction of the ureter and passing down the thigh F is very common on one or both sides, according to the prolapse of one or both kidneys. This simulates the pain caused by renal calculus, but it does not affect the penis or testicle. E.—Pain in the region of the appendix, or ovary, is also very frequent. The headache of movable kidney is often situated on the side of the kidney which is movable. The headache may extend along one side of the head, it is most frequently frontal or over one or other eye, or it may be at the top of the head and quite localised. Pain in the infractavicular region may be caused by movable kidney.

Situation of Pain in Movable Kidney.



In the majority of cases the pain is in the back in position marked A on the diagram. This marks the normal area of renal dulness, this lies between the last rib above F, the crest of the ilium, and extending about 2½ inches outwards from the spine. This area should be absolutely dull on percussion if the kidney is in place; when the kidney is out of place, or prolapsed or dropped, this area is nearly resonant.

But the only certain method of diagnosis is by palpation. In other cases the pain is just under the scapula. C.—When this occurs on the right side it is often put down to liver trouble. In other cases the pain is in the inter scapular region on either side of the spine. D.—The pain may be over the coccyx and right up the spine, and even all along the spine right up the occiput, sometimes it runs along the centre of the back of the neck or on one side. Headache in the occipital region is also very common. Numbness of the extremities may be present.

It must be remembered that movable kidney causes pain in either axilla, and may be in the form of a girdle pain round one or both sides. The majority of people with movable kidney stoop, they experience considerable discomfort in straightening themselves upright. The severe attacks of pain at the period are usually most marked in the suprapubic region. In other cases the pain may be all abdomen, and best marked at the umbilicus.

IMPORTANCE OF MOVABLE KIDNEY.

Movable kidney is so common and is so serious in the long run that every student should be thoroughly taught the art of palpation of the abdomen. It is surely more important that he should be able to use his hands than be able to stain certain bacteria. It is a very singular thing that the student is not taught the common ailments of life. How much does he know of neurasthenia, migraine, movable kidney, or dyspepsia when he leaves his medical school?

CARDIAC DISTURBANCE, such as palpitation and pain at the heart with increased rapidity of the pulse, may be due to movable kidney. I have found movable kidney present in nearly every case of exophthalmic goitre I have examined. I have not yet had such a patient operated upon.

Inordinate pulsation of the aorta may be due to movable kidney, the aorta is tender on pressure and beats violently. I have seen such pulsation cured by operation.

PROLAPSE OF THE SPLEEN.—In many cases where the left kidney is movable the lower border of the spleen can be distinctly felt, and the organ is tender. Normally the kidney helps to keep the spleen in place, when it drops the spleen drops too. It is important to remember this or a diagnosis of splenic disease might be made.

ALBUMINURIA.—Movable kidney is a common cause of albuminuria. The albumen may be present in large quantities, and the patient would certainly be rejected for life assurance unless the fact that it was due to movable kidney was known. I attended a young man who suffered with pains under the left costal arch and albuminuria. The left kidney was found to be movable, when it was supported by a belt the pains and the albumen disappeared, re-appearing when the kidney was allowed to fall. This albumen is probably due to passive renal congestion.

DYSPEPSIA is one of the most common results of movable kidney. Many cases of supposed simple dyspepsia are the result of movable kidney. Remember the relation of the duodenum to the right kidney to which it is attached, when the right kidney falls the duodenum is dragged down and partial stenosis of the pyloric end of the stomach produced. The stomach cannot pass on its contents properly and fermentation ensues, causing pain and flatulence. Dilatation of the stomach follows and is a common result of dropped right kidney. That dilatation really occurs is shown by the case recorded by Dr. Bramwell already mentioned. I believe that a movable right kidney may cause ulceration of the stomach. This dyspepsia due to movable kidney is very

severe and gradually gets worse until the kidney is supported. In many cases there is great distress, and mental symptoms may supervene. In some cases rapid emaciation takes place, and in such cases if possible the kidney should be sutured up. In these cases the gain in weight after the operation is enormous. Diarrhœa and constipation may be due to movable kidney. This is probably due to the attachment of the right kidney to the ascending colon, and of the left kidney to the descending colon. Very frequently the diarrhœa is of the lienteric form, occurring immediately after meals. Colitis is also common, being probably caused by pressure upon or traction on the colon. In some cases Mucous Colitis is the only symptom.

IRRITABILITY OF THE BLADDER is a very distressing symptom in many cases. Frequently the patient can get no sleep, being obliged to get up every hour or so and during the day being constantly worried by frequent micturition.

APPENDICITIS.—Movable right kidney may cause severe attacks of pain in the right iliac region, which may be mistaken for appendicitis and which recur when the appendix has been removed. Possibly absence of fever in such cases would distinguish these attacks from attacks of appendicitis.

Movable kidney may be congenital, or hereditary, it certainly runs in families.

CAUSATION OF MOVABLE KIDNEY.—How is it that this condition is seven times as common in women as in men. Probably this is due to the fact that in men the abdominal muscles are more powerful, the pelvis smaller, and the renal fossa deeper. In women the dragging caused by the weight of the clothing at the waist is a serious cause, possibly the wearing of corsets, though the latter is not by far the only cause for I frequently find movable kidney in women and children who have never worn corsets. Constipation is more common in women than in men and probably has a great part in the causation of movable kidney. I often find a history of a fall or severe injury years back. Lifting weights and pulling will either cause movable kidney or increase it if present, the same applies to horse exercise, cycling, and other forms of athleticism. *When pregnant a woman with movable kidney improves in health the kidney being supported, but she relapses after the birth of the child.* I find movable kidney just as common in short as in tall people, in all classes, and in young women who have never done any work.

TREATMENT BY BELTS.

I have found it quite useless to attempt to restore a kidney to its position by any tonics,

or process of fattening, or by rest. For two or three years I tried various kinds of abdominal belts, but after a time I found that they were useless and did not in any way relieve. Some years ago a young man came to me with marked dropped right kidney, which entirely prevented him from following his employment. I ordered a belt for him, which I found did not keep the kidney up. I had several interviews with the makers about it, and, realising that a mere pad on the inside of a belt could not possibly support a dropped kidney, I suggested some pressure should be made outside the belt over the situation of the pad. Messrs. Salt, of Cherry Street, Birmingham, accordingly placed a strap which enabled the pad to be driven in, and the kidney was kept up. This young man periodically goes for a new pad, and is unable to work without the belt. It is this direct pressure on the pad which makes the belt efficient in the great majority of cases. In all cases great care should be exercised, and it should be seen that the air pads do not press upon the ribs. The belt should be put on lying down, when the kidneys usually drop into place; if the kidneys do not go back on lying down, the patient should be instructed to press the abdomen gently upwards with the hand before putting on the belt. The belt not only relieves the symptoms of movable kidney, but in some cases, especially

in the case of the left kidney, it removes them. I have often found that after the use of a belt for a few months the kidney cannot be felt.

In many cases, though the kidney has not been kept up by the belt, great relief has been experienced.

CHAPTER V.

Treatment by Belt.

I have several times had the opportunity of examining people in whom I had found movable kidney when they were thin, and who had since grown stout. I have found in all that the kidney could be felt by suddenly pressing inward the fingers; moreover, although stout, their distressing symptoms remained the same.

The belt described in the appendix has been of the greatest service to my patients. It has removed pains in various parts due to movable kidney, it has stopped incontinence of urine in children; this incontinence due to movable kidney occurs during the day time and not at night. In this incontinence of urine I have found usually only one kidney down either the right or left. In some cases seminal emissions occur in the day time; a movable kidney is often present and the belt cures them. The emissions may occur at night only, if a kidney is movable the belt will stop them. In children and in people too old for operation, say over sixty, and in people with other disease, *e.g.*, heart disease or diabetes, a belt only should be advised. Some time ago I ordered a belt for a nurse; she had been obliged to give up her work through movable kidney. She wrote to me some time after to tell me she

was cured, but she said it took her two months to get used to the belt. The belt should not be worn next the skin but outside a vest.

Many of the patients who have come to operation I had seen years before, and had ordered them belts. They had discarded the belts either from impatience or because they were bulky.

One patient, a woman, a cook, complained of attacks of vomiting pain, and flatulence after food. These attacks were very serious, and unless checked would have invalided her. I found the right kidney badly down. A belt at once stopped the attacks, and she has to buy a fresh belt every year or so. She at once gets ill with indigestion and depression if the belt does not act. In this case the belt has enabled the patient to earn good wages for the past seven years. In another case a middle aged man suffered severely from headaches. I found that the right kidney prolapsed. He was very stout, and the kidney could only be felt with difficulty by suddenly pressing in the fingers while he stood up. I ordered him a belt, and it gave him far more relief than any medicine he had ever taken. He is thinking of an operation, but I do not urge it, as he is relieved by the belt. The belt should be gradually tightened and worn for a short time daily until the patient gets used to it. Moreover, the patient should be

examined periodically, to see if the kidney is being kept up. This can easily be ascertained by passing the hand from below between the belt and the body; the kidney, if down below the pad, can easily be felt. I have never known any injury being caused by people wearing these belts. An indiarubber bandage may be used instead of a belt.

When a belt is ordered the patient should be shown how to put it on properly. Attention should be directed to the strap outside the belt and over the air pad, which, when tightened, drives the air pad in. I have frequently found that this is quite overlooked, although this pressure on the pad made the belt a success. The patient should be taught to see that the air pads are blown up. I have met with cases where the belts have been worn for months without the pads being inflated, no wonder the patient has not benefitted. Another point worth remembering is that the belt should be put on and fastened lying down in bed before the patient gets up, otherwise the kidney drops directly the patient gets up and the dropping makes the patient feel unwell during the day. The bath must be taken at night, the displacement of the kidney does not matter so much then, as rest in bed for the night follows. For every case of operation I have ordered at least a hundred belts.

CHAPTER VI.

Treatment by Operation.

What cases of movable kidney ought to be operated upon?

I think that in all cases where the kidney is badly prolapsed the patient being under sixty and without organic disease, nephropexy (νεφρός kidney, πῆξις fastening) should be performed. In all cases where there are mental symptoms it should be done *at once*. The cases following will show best where an operation is necessary. Goelet, of New York, has performed the operation of nephropexy in 197 consecutive cases, in 47 of which the double operation was performed without a death and without a failure; that is the kidney did not fall again after the operation.

He describes his operation in the American Medical Journals.

This is evidently the surgeon to follow, for his experience must be unique. It has been urged against the operation for suturing up the kidney: (1) That it is useless as the kidney falls again very soon. I have known this to occur in three of my patients who were not relieved by the operation, but I am sure that if the kidney is sutured up according to Goelet's method that

it will remain fixed. (2) That it is dangerous. Goelet's figures disprove this; it certainly is not dangerous if the operation is thoroughly and carefully performed. (3) That there is great shock after the operation, and that the operation weakens the patient for months. I have seen all my cases operated upon, and have attended them up to the time of their leaving hospital. There is very little shock and very little fever if any, there is pain and discomfort for the first day or two, after that the patient gets quite comfortable and happy. As a rule the patient ought to be quite well in three months.

Cures by Operation already published.

Patients upon whom nephropexy has been performed and their cases published two years ago, but some of which I republish on account of their importance, and in order to record their progress. Ten cases in all I recorded, none of them have relapsed. Having had a case of mental depression and hypochondriasis cured by operation I went further, and had cases of melancholia operated upon.

CASE I.

Acute Melancholia Cured by Nephropexy.

I was asked to see a young married woman by Dr. Elkington. She was suffering from acute

melancholia, with delusions. She imagined that her head was cut off, and that her husband was dead. I observed that she was deeply pigmented round the eyes, and on enquiry found that she suffered severely from migraine. The right kidney was badly dropped, and I strongly advised the husband to have the kidney stitched up. I was told that two gynæcological surgeons were called in afterwards who contradicted my diagnosis of dropped kidney. Finally Mr. Barling was called in, he recognised the condition and operated. In a few weeks the patient and her husband called to see me, she was perfectly well, the pigmentation of her face had disappeared, as well as the headaches. The husband told me he had taken his wife to many places at great expense, and that she had been examined by sixteen medical men before I saw her, none of whom discovered the dropped condition of the kidney. This patient has had a child and is perfectly well at the present time, three years after the operation.

CASE II.

I have met with a second case of melancholia with dropped kidney. I saw the patient, a woman, nine years ago, with melancholia, and I made a note of the dropped kidney then, but did not know of its importance

Oct? 1st 1905

Dear Sir

Replying to your letter of the 30th ult. there are several reasons why I must decline to allow you to publish my name and address. the prime one - for the sake of my boys. You may mention however that the success of your treatment in my case is beyond question & I feel convinced that had the operation been performed years ago, I should not have suffered mentally. Any bona-fide applicant to you may write to me and I should not object to an interview with any medical man.

Yours sincerely

(CASE II.)

at that time. I saw her again in August, 1902. During the intervening years she had been three times in a public asylum with melancholia. When I saw her this time she was very depressed, screaming at times, and with delusions. I advised the husband to have an operation performed at once. The authorities at the private hospital where she went were much alarmed by her conduct. Mr. Gamgee operated. I have a letter from her husband, stating that she is much better, that it has stopped her going to the asylum this time, and that she has been able to go out shopping alone like any other sane person.

Within six months this patient recovered perfectly.

She suffered from headaches and was suicidal; she was afraid she would drown herself. She suffered from the shivering attacks so often met with in migraine. I have heard from her recently and she remains perfectly sane and happy. The operation was performed more than two years ago. Dr. Crew, of Wednesbury, tells me that he once signed the certificate for her to go to an asylum.

This shows what happens to an insane patient with a dropped kidney. She recovers with a year or two's rest, and is released. When she gets about again she soon relapses. Contrast this case with those operated upon and not sent to an asylum. In the latter there is no relapse.

CASE III.

Inability to Walk Cured by Nephropexy.

When the right kidney is badly dropped the patient is often unable to lift the right lower extremity without great pain, and therefore cannot walk. An operation is necessary, and always successful. Some years ago I sent a patient with this trouble to Mr. Christopher Martin, of this city, upon whom he operated with a successful result.

Nervous Exhaustion lasting three years and Cured by Nephropexy.

CASE IV.

This is the case of a woman who had been noted for her strength. She had been in hospital, and was looked upon as the strongest nurse, and was constantly being asked by the other nurses to lift their patients for them. Three years before I saw her, lifting began to be a burden to her, she became very exhausted and had to leave the hospital. She then took up private nursing, but she was knocked up by every case and could do nothing. She was tired by the least exertion, but was always better when lying down. She suffered from severe backache, and from severe headaches (migraine). She complained that she was weak from the waist to the knees. I found the right

Fig. 1. Dropped right kidney, before operation.
Weight, 7st. 10lbs.

Fig. 2. After Nephropexy.
Weight, 10st. 8lbs.

kidney badly dropped and recommended operation. Mr. Barling stitched the kidney up. Now the headaches have disappeared, she can walk about well, and her voice which was very weak, is much stronger. When I first saw her she could scarcely speak, and was unable to walk or sit up in a chair. She is now well.

CASE V.

A young woman had been ailing for years with migraine and exhaustion. I found the right kidney badly down, and as the patient had taken all kinds of medicine without relief, I recommended an operation, which was done in London, with the result that she has completely recovered, is well and strong, and not afflicted with headaches.

These cases of neurasthenia in women were published two years ago, they were cured by nephropexy and they remain quite well. I have met with many cases since in women and men and I am sure that the most common cause of neurasthenia is movable kidney.

CASE VI.

Attacks of severe abdominal pain (Dietl's crises) chiefly over the bladder, severe cutting pains at the orifice of the urethra, and great frequency in micturition, with constant ill-health

and irritability of temper, cured by operation after more than ten years of suffering.

The patient was a woman, whom I first saw ten years ago. I found the right kidney badly dropped, and she had the above symptoms. I did not know then of the importance of movable kidney, and did nothing to support it. She saw me on and off without much relief. At last the bladder and urethral trouble were so great that her life was almost unbearable, as was also that of her husband. I tried a good belt, and she was practically cured for some months, but the symptoms returned. I found the belt did not keep the kidney up, and I suggested that it should be stitched up. Mr. Barling saw her with me and supported my opinion.

She declined the operation, and for another year suffered repeatedly from Dietl's crises, mental depression, and the urethral trouble. Finally, she consented to have the operation done at her home. Mr. Gamgee operated, stitching up the right kidney, and in a few months she was quite cured. Before the operation she could not walk about. I saw her afterwards, and she had flat feet from walking too much. Her husband tells me that her disposition is quite altered, that she sings about the house and is quite happy.

Fig. 3. Dropped right kidney, before operation.
Weight, about 7st. 9lbs.

Fig. 4. A few months after Nephropexy.
Weight, 10st. 5lbs

This patient remains quite well three years after the operation.

CASE VIII.

MIGRAINE, OR PERIODICAL HEADACHE CURED BY NEPHROPEXY.

Twelve years ago I saw a young lady who suffered daily from severe attacks of migraine. I found the right kidney dropped, but I knew nothing then of the effects of dropped kidney, and I did not cure her. Nine years later she married, and her husband brought her to me for relief of the terrible headaches. He said that both their lives were spoiled by these headaches, that they were so severe she could not go into society, and could not enjoy life at all. I told him the right kidney was dropped, and he at once said that he insisted upon having the kidney stitched up. I told him that I had relieved many cases of migraine, with dropped kidney, by ordering a belt to be worn, in this way supporting the kidney, and I recommended him to Mr. Barling. Mr. Barling refused to operate at the husband's request several times. Finally he did so, and the operation cured her. I saw her a year afterwards, and she said she only occasionally had a slight headache and none of the severe attacks, and since the operation life had entirely changed for her, she was quite happy

Fig. 5. Patient, aged 53, suffering from dropped left kidney. He has the characteristic appearance usually present when a kidney is down. Patient has not been operated upon.

and never had to lie up for headaches. I have observed that in all cases which I have had operated upon, where headache has been present, it has been cured.

This patient remains quite well.

CASE IX.

PAIN may be the only symptom of dropped kidney, the pain may be intolerable, and the patient may be incapacitated by it. A woman from Tipton was recently operated on by Mr. Gamgee. Her right kidney was dropped, and she was in constant pain in the right hypochondrium, which prevented her from working. She was quite cured by the operation.

Local pain due to movable kidney is at once cured by nephropexy.

Cases cured by Nephropexy not hitherto recorded.

CASE X.

ACUTE INSANITY CURED BY NEPHROPEXY.

A woman, 37 years of age, was brought to me in May of this year suffering from delusions. She fancied that she was the King, that she was lost, and said she was cast off. She threatened suicide, heard voices, and had the delusion that she was married. She would not answer questions, and could not tell to whom she thought she was married. She had complained of her

head being muddled, also of pain in the head. Her friends said that almost every night she was uncontrollable and violent. I found the right kidney badly prolapsed, falling right into the pelvis, and I got her into the General Hospital, Birmingham, for it to be sutured up. The authorities there were so alarmed by her condition, they considered she was uncontrollable, and dismissed her. I then took her into a private hospital. Mr. Jordan Lloyd sutured up the right kidney on June 10th. Within a fortnight she was rational. She gave no trouble whatever after the operation, and lost all her delusions before she left the hospital. I heard from her lately, she writes a perfectly coherent letter, and is evidently quite sane. I have seen her friends, who tell me that she is quite well and rational.

I have received the accompanying letter from this patient's father.

CASE XI.

MELANCHOLIA CURED BY NEPHROPEXY.

A young woman, aged 21, consulted me in 1904. She had been a teacher of music, and was a very distinguished student of the Royal Academy of Music. Four years ago her health failed, she became ill with severe headaches and mental disturbance. Six years ago she had a bicycle accident, riding into a fence and being

Sept. 28th 1905

Dear Sir

In reply to yours of 27th respecting my Daughter's case I have no objection whatever your doing what you wish as I think it is a case that ought to be known, as should you have a similar case it would no doubt give the Patient confidence to have the operation performed. I am happy to say she is going on very nicely, she has not commenced her household duties at present

as she thought she would
have her 3 months rest
as you recommended which
will be up next Saturday -

badly hurt. When she came to me she had the delusion that she was lost. She said she had fallen hopelessly from God and was very depressed. A week before she came to see me, she cut her left hand with a pair of scissors between the thumb and forefinger and said she wished to kill herself, that she was past help and her case was hopeless. She was most miserable, and would not take her food. I told the parents that she would either have to go to an asylum or have the right kidney, which was badly prolapsed, sewn up. She was operated upon by Mr. Gamgee *the day she came to consult me*, the kidney being sutured up. The operation was performed in September, 1904. In March, 1905, her mother called to see me, she said her daughter had not been sent to an asylum, that she did all the cooking for the house, and the sewing, that she played and read to them, went out by herself, and had no suicidal tendencies ; in fact, she was sane.

CASE XII.

MELANCHOLIA CURED BY NEPHROPEXY.

A man nearly sixty years of age was brought to me early in 1903. He had been away from business three months on account of mental depression. He had suffered from insomnia for several weeks, and all his life, at times, had headaches. Two of his sisters also were sufferers from headaches. When I saw him he was talking of

dying and had distressed his relations by asking them to find a place of burial for him. He went down on his knees and asked God to take him. He was very depressed and had attempted suicide. The right kidney was badly prolapsed. Mr. Gamgee sutured the right kidney *the day after I saw him.*

I have heard from this patient this year, his letters are quite rational, and the operation has saved him from suicide or an asylum.

CASE XIII.

NEURASTHENIA, MENTAL DEPRESSION WITH DELUSIONS, HEADACHES, INSOMNIA, AND EXHAUSTION, CURED BY NEPHROPEXY.

A single young woman consulted me in 1903. She was tall and thin. There was no family history of insanity, but for a long time she had had the delusion that she was dirty. She had been ill for over five years, and had been sent sea voyages very frequently, these always made her worse, and she had to see a doctor at every port. She had been very depressed and had threatened suicide. She complained of being weak and slack, was easily exhausted, and could not do anything, she had frontal headaches, constant nausea and flatulence. She also suffered from backache. Headaches were in her family. The right kidney was badly prolapsed, in fact when standing it fell

into the true pelvis. She was operated upon by Mr. Gamgee, the kidney being sutured up. *Before the operation menstruation had ceased for five months, after the operation menstruation became regular.* The result of the operation has been splendid. She is quite well and strong. She does not suffer from the delusion she had, nor from the depression, nor does she have headaches and backache. The insomnia is also cured. She has taken no medicine since the operation. This patient has continued and is quite well more than two years after the operation. In this case the influence of a movable kidney in causing amenorrhœa is seen, and its cure by suturing up the kidney. This effect upon the pelvic organs in the female I have met with frequently.

CASE XIV.

ATTACKS OF PAIN IN THE HEAD after each period, prolapsed right kidney found, belt ordered but discarded; after six years the patient re-appears insane, and is cured by Nephropexy.

This young woman suffered from severe loss of blood at each period, with severe headaches after each period, lasting some days; she often vomited from the pain. I found the right kidney badly prolapsed and recommended a belt. She used to worry about the gas being turned off at night, never being certain that it was. She suffered also

from diarrhœa after meals. I saw nothing of her professionally for six years, when she called in great distress. She had been told that her mind was diseased. It was a fact that she had been seen by a lunatic asylum superintendent, and there was no doubt that she was insane. Her delusions were chiefly about getting married. At first I could not find the kidney, it had descended completely into the true pelvis, but after stroking the right side upwards I found it, on her second visit to me. To save her from an asylum I recommended an operation. Mr. Barling agreed with my diagnosis and sutured the kidney up. For some time she was eccentric and gave a great deal of trouble, but within twelve months she was well, she was able to travel about and look after herself, and, in fact became sane. In this case the menorrhagia and sexual delusions were probably caused by the kidney being right down in the pelvis.

CASE XV.

DAILY FRONTAL HEADACHES, bad attacks of pain at the period, lienteric diarrhœa, with mental symptoms, being afraid she would go out of her mind, and hinting at suicide, cured by Nephropexy. Great increase of weight after the operation.

This young woman I first attended in 1897. She complained of very severe attacks of head-

ache nearly every day. She also suffered from attacks of diarrhœa, especially after meals, and constantly complained of nausea and pain after food. At each period she complained of very severe pain and faintness. She suffered severely from insomnia. She complained a great deal of smarting and burning in her throat, also that her head felt stupid. She was often afraid to go out, and was afraid she would lose her reason, and told me that she might make an end of it. She was a great cause of anxiety to her parents. I found the right kidney badly prolapsed. She tried a belt, but said it did not do any good. She felt she would like to kill someone. She continued in bad health, getting gradually worse for eight years, when she decided to have an operation. The right kidney was sutured up by Mr. Gamgee. Within four months of the operation she weighed three stones more, her headaches, insomnia, and trouble at the period were quite cured, and she has lost her nervous fears. She is at the present time in perfect health. The great increase in weight will be noticed in this case. Her symptoms indicated serious indigestion. The smarting and burning in the pharynx is noteworthy, nothing could be seen to be wrong. It will be found that many women with movable kidney complain of their throats.

CASE XVI.

HEADACHES, DELUSIONS, AND INSOMNIA CURED BY NEPHROPEXY.

A young woman had a delusion that there was something alive in the back of her head. She suffered from insomnia and had also severe headaches. She was hypochondriacal, always talking about her ailments, and worrying everyone about her. Three months previous to seeing me she said she had swallowed a fly and that it had gone into the back of her head, since then she could talk of nothing else but her symptoms. The right kidney was badly prolapsed. Mr. Gamgee sutured it up, and in three months she was quite well and at work again.

CASE XVII.

NEURASTHENIA, illness of about twenty years duration, constant exhaustion, dyspepsia, Dietl's crises, irritability of temper, and finally suicidal impulses, cured by Nephropexy.

This woman I have known for over twenty years, she has suffered many years from exhaustion, for a long time being unable to walk about or stand up in church, she was always being troubled with dyspeptic symptoms, and always ill, she had headaches but not severely. Eight years ago it was found that the right kidney was very badly prolapsed, she could feel

the kidney herself, and push it up. At this time she had several attacks of very severe abdominal pains with vomiting, faintness, and collapse (Dietl's crises). The nature of these attacks was not recognised by the medical men who were called in. She tried one of Salt's belts, she had no more attacks of pain and was able to walk about very much better. She continued fairly well for some years, wearing the belt, which, however, gave her a good deal of trouble in the way of alterations. The kidney became smaller, by being kept up, and therefore less congested. The smaller the kidney became the more difficult it was to keep it up. Whenever the belt did not keep the kidney up, she was ill. Last year, after a sea journey, she was very ill and had to keep her bed. It is a fact that people suffering from mobility of the kidneys cannot endure a sea journey. She became extremely depressed and emaciated and was unable to control her temper at all. On her return she decided to be operated upon. Before the operation she weighed 7st. 11lbs. Nine months after the operation she was three stones heavier. Mr. Gamgee operated and she is now in perfect health. Her memory, which was very defective before the operation, is now perfect, she had to wear glasses before the operation which she has now discarded, her sight being excellent. This is probably due to

improved muscular tone, brought about by the operation. She has now no depression, is far better tempered, and has never any trouble at the period as she used to have. The success in this case is astonishing to everyone who has known her. The patient remains quite well. Her friends did not recognise her three months after the operation. For years she had been very fragile and feeble and now she is stout and strong. This effect upon the sight I have noticed in another case.

CASE XVIII.

NEURASTHENIA.—A man suffering from failing mental and physical power cured by Nephropexy.

A young man, aged thirty-two, consulted me early in 1904. He complained of continual headaches, of dullness, and moroseness, also of physical inability to do his work; he also complained of pain across his back, and he had a dread of falling; he used to stagger when he was walking. He had a bad fall and bruised his head twelve months before I saw him. I found his right kidney badly prolapsed, and recommended him a belt. After wearing the belt a few months all his symptoms were relieved, and the kidney could not be felt at all, but of course it was still mobile. He told me that the belt had kept him working and cured his headaches, but that

he was not quite fit, and that he preferred to be operated upon. Mr. Christopher Martin operated upon him in September, 1904, and found the kidney quite loose, and in December, 1904, the patient wrote announcing that he was well, that he had lost his head trouble, that he did his full days work with ease; in fact, he could work twelve hours a day easily.

CASE XIX.

NEURASTHENIA. A man suffering from loss of memory and failing mental powers cured by Nephropexy.

A man, aged thirty-four, of the Royal Engineers consulted me at the end of December, 1903. He complained that on and off for many years he had attacks every few weeks of dullness, depression, loss of memory and energy. He suffered with headaches, in fact they were in his family. His right kidney was prolapsed and an operation was recommended, but he preferred to try various medicines, which he did for twelve months. He was operated on in 1904 by Mr. Gamgee. A few weeks ago I received a letter from him saying that he was perfectly well, could now enjoy life, had no depression, no headache, his memory was perfect, in fact he was perfectly well, and could do his work well. Previous to the operation he had been in danger of losing his

situation, he had been superseded on two occasions. He was very depressed and suicidal before the operation, but these symptoms have quite passed off. His wife told me that they had been married over eight years, that he had always been depressed and was getting worse. He now enjoys his life. This patient tells me he most certainly should have been driven to suicide had he not been operated upon.

CASE XX.

NEURASTHENIA, loss of mental power, cured by Nephropexy.

A woman, aged 48, who acted as housekeeper to her brothers, consulted me on April 14th this year. She complained of dull pain at the pit of the stomach and mental depression, she had also pain opposite the middle of the right scapula, between the scapula and the spine. She was never well, she could not hold herself upright with comfort. She rarely had headaches, but found she was getting stupid at writing letters, and losing her brain power to some extent. She was very much afraid lest she should be unable to carry on her work as housekeeper to her brothers. I found the right kidney prolapsed and recommended operation, and she agreed to this. Mr. Jordan Lloyd operated early in May this year, and I received a letter from her, July 24th, saying

that she is glad to report herself as being quite well again, in fact, she never felt better.

She sees perfectly without glasses, which she was unable to do before the operation. In fact the operation has done everything that was expected of it.

CASE XXI.

NEURASTHENIA, dyspepsia, exhaustion, insomnia, loss of consciousness and loss of memory, cured by Nephropexy.

A young woman, 23 years of age, consulted me in December last. She had been ill six years, she could not eat well, all solids gave her pain in front of the chest and in the back between the shoulders. She suffered badly from insomnia. She was always tired and exhausted after work, which was that of a buyer in a millinery shop. She suffered from daily headaches. Menstruation was very irregular, about six times a year. She had had three attacks of sudden loss of consciousness. Mr. Gamgee operated in January this year. Now, a few months after the operation, she is quite well, *menstruation is normal*, the insomnia, headaches, and dyspepsia have quite disappeared. Before the operation she had tried a belt without success and had been medically treated a long time. She also consulted a physician, who recommended dumb-bell exercise. She is now

busy at work again and quite well. Her headaches, insomnia and dyspepsia of six years duration have been cured by nephropexy. It is worthy of note that in this patient the memory failed badly, so that she was obliged to write everything down, since the operation her memory has quite recovered. The attacks of loss of consciousness were preceded by headaches. They may have been of an epileptic nature, she has had no recurrence of them.

CASE XXII.

BACKACHE, especially on right side, severe headaches, and severe pain on the first day of the period, cured by Nephropexy.

This patient, a married woman, consulted me on February 5th, 1904. She weighed 8st. 10lbs She attributed her illness to overstrain from cycling the previous September. She complained of weakness, and of a sensation of bearing down and falling down in the abdomen. The probability is that the kidney was movable before the strain from cycling, because she was always well when pregnant and ill after confinement, the kidney in the former condition being kept up. She was operated upon by Mr. Bennett May. She suffered a great deal from insomnia and flatulence but gradually got better. I saw her in February

last, she weighed 11st. 10lbs. She had lost all her trouble at the periods, together with her headaches and debility. The right kidney was sewn up, and the pain across the back on the right side disappeared.

CASE XXIII.

Severe Dyspepsia cured by Nephropexy.

A young woman, aged 22, consulted me early this year. She complained of pain after food, right across the stomach, and occurring immediately after taking solid food. She also had pains down each side of the abdomen, she was easily tired and suffered from severe frontal headaches. She also had a great deal of pain at the period. The right kidney was down and caused bulging of the abdominal wall just below the right costal arch. All her symptoms were relieved by resting in bed. She was emaciated and looked haggard. She could not hold herself up properly. Mr. Barling sutured up the right kidney, and in three months she was quite well. This patient was really very ill before the operation. I have only once before found the right kidney actually causing bulging of the abdominal wall.

CASE XXIV.

NEURASTHENIA, headaches, and exhaustion for many years cured by Nephropexy of both kidneys.

A young woman, twenty-three years of age, consulted me for headaches and for being constantly weak and tired. She was always exhausted and often could not get up to bed without assistance. She frequently had to be undressed, after having exerted herself. She had severe pains before the periods, and complained also very much of increased frequency in micturition, having to get up frequently at night. All medicines had failed to give her relief. She was under medical treatment for eighteen months before the operation. The increased frequency of micturition was a great cause of distress to her. Both her kidneys were badly prolapsed, and a double operation was performed on her by Mr. Barling this year. She saw me in July last, when she was quite well. She was a stone and a half heavier than in the previous summer, 1904.

CASE XXV.

HEADACHES LASTING SIX YEARS CURED BY NEPHROPEXY.

A woman, 51 years of age, consulted me for very severe headaches. Besides these headaches she

Sept 30/05—

I Mrs. Underwood
of 17 Leicester Road
Coventry was
operated on a little
over 12 months ago
in the General Hospital
on Dr Buckley's ad-
vice for very severe head
aches which spoilt
my life & really thought
the Asylum would

who was operated upon for
dropped right kidney on D buckling
adhesions for headaches of 12 years
duration. I have seen him
within the last 14 days & he
told me he was quite cured
of his headaches.

be my doom.
I suffered from constant
headache for more
than 6 years & since
the operation I have
been quite well.
& am now thankful
that I underwent
the operation. I have since
gained nearly a stone in
weight.
I know personally
a man of Coventry

had a great deal of dyspepsia. She complained that she could not draw a deep breath properly. I found that the right kidney was badly prolapsed. I sent her into the General Hospital under Mr. Gamgee, who sutured up the right kidney. Within three months she was quite well and has remained so since. The patient has just written me the accompanying letter.

CASE XXVI.

NEURASTHENIA, severe headaches, and spinal neuralgia cured by Nephropexy.

A young woman, aged 30, consulted me in August, 1903, for daily frontal headaches, which she had had nearly all her life. She complained of pain between the shoulders, pain in the spine, and pain in the coccyx. She suffered severely from dyspepsia with flatulence. She was very depressed and suffered from insomnia and dreams. There was pain in the back on the right side over the normal situation of the right kidney. Her right kidney was badly prolapsed. Her ailments spoiled her life. She complained of the right leg aching at times, and of pain across the abdomen. She had been very ill for more than eighteen months when she came to me. She was operated upon in January this year by Mr. Gamgee. She is now quite well, and is a stone heavier in weight; the dyspepsia has disappeared.

She sleeps well, her headaches rarely occur, she has lost the constipation and all her pains. To her great satisfaction the mental depression has disappeared.

CASE XXVII.

A MAN SUFFERING FROM HEADACHE of twelve years duration cured by Nephropexy.

In February, 1904, a man aged 38 consulted me for violent headaches, which he said had spoilt his life for twelve years. Every week he suffered from severe pain in front of the head, back of the head, and both temples. He used to have pain in the abdomen alternating with pains in the head. The headaches were so violent that he had to go to bed for a day or two every week. He was muddled in his brain and had lost his memory, and could only act as a caretaker. I found his right kidney badly prolapsed. I sent him into the General Hospital under Mr. Barling, who operated in March, with immediate relief to his headaches, in fact, he has had no headaches worth speaking of since. This man had been taking medicine for six years.

CASE XXVIII.

SUPPOSED LUMBAGO for three years at once cured by Nephropexy.

A young woman twenty years of age came to me complaining of pains across her back, rather low

down; the pain was very severe at the period, and at that time it went more round the right side. Whenever she walked or exerted herself much she had this pain, in fact she had suffered from it for three years, and had been treated for lumbago. She was better lying down, worse when up, and she was liable to headaches. The right kidney was prolapsed, and operation recommended. Mr. Gamgee sutured the kidney up, and within three months she was perfectly well, and has remained so.

CASE XXIX.

ATTACKS OF SEVERE PAIN, resembling attacks of gallstone colic, cured by Nephropexy.

This young woman had an accident, having been knocked down by a cycle twelve months previously. After the accident, she frequently had attacks of pain round the right side, in fact, the attacks occurred every few days. But there was no clear history of jaundice. The right kidney could be felt prolapsed. She complained of weakness and pains in the right leg; these two symptoms aid in distinguishing between attacks of pain due to movable right kidney and attacks of gallstone colic. They indicate movable kidney. After the right kidney had been sutured up by Mr. Gamgee the attacks ceased, and she has had none now for over ten months.

I find these attacks as a rule can be checked by a well-fitting belt.

CASE XXX.

HEADACHES, EPILEPSY, AND ABDOMINAL PAIN. Headaches and pain cured by Nephropexy, epileptic attacks much diminished in number.

A young woman, 24 years of age, suffered from severe headaches usually at the back of the head, she also suffered from epileptic attacks. She never went a week without a severe headache. She complained of a dragging pain round the stomach, which was always relieved by lying down. She was operated upon by Mr. Gamgee. The headaches were promptly cured, the fits were reduced in number to about three a year instead of three a month, and were much less severe.

It is most likely that this patient, who was operated upon only eighteen months ago, will now be quite cured of her epilepsy.

CASE XXXI.

SEVERE HEADACHES immediately cured by Nephropexy, kidney falls from severe cough with return of headaches, the kidney is sewn up again, with cure.

A woman, forty years of age, who had suffered for at least five years from severe headaches. For

two years she was under constant medical treatment. When she came to consult me in November, 1904, I found the right kidney badly prolapsed. I recommended that it should be sutured up. This was done, and the headaches vanished completely for about four or five days after the operation. Unfortunately she contracted influenza in the hospital, and had severe bronchitis with catarrhal pneumonia, with a severe cough for about a month. When she left the hospital and began to go about the headaches returned. When I next saw her, the right kidney was again movable. This was due to the severe coughing, which had broken down the sutures before the kidney had had time to adhere properly. After suffering very severely for some months she wished the kidney to be sutured up again. This was done, and the headaches were immediately relieved.

This case clearly shows that the headaches were due to the prolapsed condition of the kidney, for when it was sutured up the headaches disappeared, but immediately it became prolapsed again from coughing the headaches re-appeared, the second operation again relieved them.

I have recently heard from this patient that she is very much better and that the severe headaches have gone.

CASE XXXII.

NEURASTHENIA, HEADACHE, PALPITATION, pains in the spine, and exhaustion cured by operation.

A woman, aged twenty, consulted me in December, 1904. She had been ill for two years with pains in her back, between the shoulders, and also with palpitation, she had suffered from pain round the throat and in the tongue. She had had severe attacks of pain over the liver and had suffered from numbness of the hands and feet. She had pain from the coccyx up to the top of the spine. She was always tired and faint, and frequently used to cry at night from exhaustion. On an average she had two very severe headaches a week. The right kidney was badly prolapsed, and an operation was recommended. She consented, and Mr. Barling operated in March. She came to see me three months after the operation, she was cured of all her symptoms, and was in good health, she was 5½lbs. heavier than before the operation.

CASE XXXIII.

HEADACHES, DYSPEPSIA, and loss of weight cured by double Nephropexy.

A widow, aged 38, consulted me in May last. I found both kidneys dropped, and as her health was steadily declining, I recommended her to have both her kidneys sewn up. Mr. Jordan

Oct-5/05-

I was operated upon in
Juniata Hospital the end
of July last for double
Dropped Kidney by
Dr. Jordan Floyd on
Dr. Suckling's advise. Head
aches, pain in the stomach which
was spoiling my life have gone
& am pleased to say I have
not felt so well for six years
& pleased I went through the
Operation

(CASE XXXIII.)

Lloyd did the double operation early in August, there was no shock and little fever. She has gained about eight pounds in weight in about ten weeks, and the headaches and dyspepsia have disappeared entirely.

CASE XXXIV.

Epilepsy and Double Dropped Kidney.

A married woman consulted me in July last. For six years she had suffered from severe epileptic attacks. The attacks always came on when she got out of bed in the morning, if she could get over half-an-hour without one she was safe for the day. Two years ago she had no attacks for four months, but since then she had not gone one month without an attack. In the attacks she fell forward, lost consciousness, and bit her tongue. On examination I found both kidneys badly dropped; in fact, in the iliac region on both sides. I considered it most likely that the attacks were caused by the sudden dropping of the kidneys on getting out of bed, and recommended the double operation. Mr. Jordan Lloyd operated, and she has now gone three months without an attack, and is wonderfully better in health, having gained nearly a stone in weight. Of course it is too early for me to call this a cure, but it is a case of great importance, and I hope

later on to report that she has been cured. No medicines were ordered her.

Review of the cases operated upon.

It will be noticed that out of thirty-four patients operated upon, four only were men, thirty being women. Among the four men two had general exhaustion, neurasthenia, and brain exhaustion, in fact, one confessed he was suicidal, and he was suffering from melancholia; one was operated upon while insane.

Of the thirty women operated upon, six were quite insane at the time of the operation, in five of these melancholia existed, in the sixth mania. In three other cases there were decided mental symptoms, and in three there was loss of memory and mental power. Thus among the thirty women operated upon the brain was affected seriously in at least twelve cases, and all the men were depressed. Probably there were more mental cases than I have recorded. It will be observed how frequently headaches, insomnia, and loss of memory were present. What is the greatest danger of movable kidney? There can be no doubt that insanity is the chief thing to be dreaded, and for this reason alone, when the kidney is markedly prolapsed it should be sutured up. No doubt many of these cases of insanity caused by movable kidney have been sent to

asylums, in fact I know it to be so. The immediate relief of headaches that have periodically occurred for many years is astonishing.

It may be asked what led to the operation in these cases. Being in practice as a neurologist, I was astounded by the great number of patients coming to me for the treatment of nervous ailments, who had movable kidney. I had, of course, disregarded the condition for years, but when I found that about forty per cent. of these patients with nervous diseases had movable kidney, I was forced to the conclusion that the displaced kidney had something to do with nervous disorders. All physicians know the value of rest in nervous women, and rest is what I used to order them. It did good for a time, but they all relapsed on getting about again. I ordered belts to support the kidneys. I found that when the kidney was kept up the headaches disappeared, and when the belt did not act and the kidney fell again, the headaches re-appeared. In very severe cases where the belt was of no use, with the knowledge derived from the use of belts, that elevation and temporary fixation of the kidney cured headache, I reasoned that nephropexy would cure them permanently, and so recommended it with very good results.

As to various pains, crises and Dietl's crises the same argument applied. As to insanity and

mental disorders my information was obtained thus. I saw a woman years ago with attacks of pain over the gall bladder and with hypochondriasis. She was a terrible talker and I dreaded her visits. Dr. Savage opened the gall bladder but there was no gall stone. She remained hypochondriacal with the pains as severe as ever, the right kidney was found to be movable, it was sutured up, and she was cured.

Another case of a woman with movable right kidney and hypochondriasis was also cured, Dr. Savage operating. Now if hypochondriasis which leads to melancholia can be cured by operation why not operate in cases of melancholia and other forms of insanity associated with movable kidney. I proceeded to advise suturing up in these cases and it was done with immediate success. Several of the patients were actually insane at the time of the operation, and had been condemned to an asylum before the operation. As to the operation I can only say little. Goelet's operation is the one to be performed. I have attended at the operation in nearly every case and seen the patients till they left hospital. There is little shock, and pain only for about twenty-four hours. The patient ought to rest in bed twenty-four hours before the operation and be properly prepared and should

stay in bed three or four weeks after, and should do no work for three months, and then work according to their strength. Flatulence and constipation are troublesome in many cases, this is probably due to interference with the colon, it being necessary to separate the kidney from it. Calomel given by the mouth and turpentine injections relieve these symptoms. Vomiting must be checked. Nothing should be given by the mouth during the first twenty-four hours except hot water, after this chicken broth or other fluid food for two or three days and then solid food can be taken. I ought to mention too a remarkable effect on the skin and on the eyes produced by the operation. In nearly all these cases there is marked pigmentation around the eyes and the skin generally is dark. After operation all this pigmentation disappears and the patient looks much clearer in complexion and much younger and better. As to the eye I have mentioned the effect on the accommodation in two cases. In nearly all, the sclerotic becomes much whiter and the eyes look very bright. The hair, too, instead of falling off constantly, becomes thicker and stronger.

I have just been asked, is the prolapsed kidney tender? In children and men it is certainly not. In the majority of women it is not, but it is when

the kidney is very low down, and enlarged from congestion.

I record several temperature charts to show how little disturbance there is after nephropexy. The chart facing this is taken from a woman who had both kidneys sutured up at the same time. She had pain for the first twenty-four hours, but was easy in thirty-six hours. Note how little fever there is, and how little increase there is in the pulse rate. It will be seen that the respirations are increased out of proportion to the increase in the pulse rate. This is probably due to the proximity of the wounds to the diaphragm and to the elevation of the kidneys right up to the diaphragm.

Many medical men are in the habit of frightening people about an operation for fixation of the kidney. They tell them they had better spend their money on a holiday or at the sea-side, that the shock of the operation will take several months to recover from, all this talk is nonsense. The charts recorded here speak for themselves, Some medical men say that it is no use fixing the kidneys, for they fall down again directly, this may be so occasionally if the operation is improperly done. but such an expression of opinion shows how small is the experience of men who talk like this. Others state that it is all rubbish, let them grow older and observe.

DOES MOVABLE KIDNEY EVER PROVE FATAL?

I think it does in rare cases (see Bramwell's case). Movable kidney may cause death from hæmorrhage or from shock in Dietl's crises, or from torsion. Moreover, there is no doubt whatever that many cases of suicide from mental depression are directly attributable to movable kidney.

CHAPTER VII.

Failures.

Among the cases I have had operated upon there have been failures and complications.

Compared with the number of cases operated upon they have been few, and in no way do they condemn the operation nor can they by any possibility cause any doubt as to the various symptoms being caused by the mobile state of the kidney. In all cases of operation the kidneys, one, or both, were found markedly prolapsed.

1. A woman operated upon for prolapsed right kidney with a delusion that she had killed her child by neglect was no better. I was hoping that in time she would be cured. At last I examined her and found the kidney had dropped again. I must say she was a most hardworking woman, and probably brought the kidney down by doing heavy work too soon. On finding the kidney in this case was still movable I sent the patient to Mr. Barling, who wrote me as follows confirming my diagnosis :—" Dear Suckling, I saw Mrs. C. to-day, and can only agree with you that her kidney is again movable."

2. A woman operated upon for digestive trouble, the right kidney being mobile. She was

not cured. In this case the kidney had become loose again.

3. A young man with hypochondriasis had dropped right kidney, was operated upon and not cured. I have had no opportunity to examine him as to the condition of the kidney.

4. In another woman the operation failed to relieve, and I found the kidney prolapsed again.

5. In one woman the kidney was loosened by severe cough due to influenza and pneumonia. The kidney was again stitched up and she writes that she is well.

It is very difficult to keep in touch with all one's patients. Sometimes, although they are cured, they will not take the trouble to write, and where there have been mental symptoms they naturally wish the matter to be forgotten.

It does not do to take it for granted because the operation has not at once succeeded it will not cure in the end. One woman who had been operated upon over two years ago for headaches and mental symptoms of many years standing was no better for the operation, and I thought the case was a failure. To my surprise she called upon me very recently and is quite well.

In all cases where cure does not result the patient should be carefully examined to ascertain whether the kidney has fallen again or not, if it has, then it ought to be sewn up again at once.

Great trouble has been caused by the deep sutures, giving pain and forming sinuses, the sutures coming away again months after the operation. In two cases slight plegmasia dolens occurred. Of course the operation has to be learned. Goelet's operation is the simplest and safest.

One patient, a woman, who was depressed and hypochondriacal, became a maniac after the operation, but in this case suppuration occurred. Ultimately she completely recovered. Within the last three months I have had thirteen cases operated upon by Mr. Jordan Lloyd, in exactly the way in which Goelet operates, with perfect and rapid recovery and without any complications.

CHAPTER VIII.

Visit to a Public Lunatic Asylum

(not in warwickshire).

On September 9th, 1905, I visited a large public asylum, and with the permission of the Medical Superintendent, examined 50 of the inmates on the female side for the condition of "dropped kidney. These patients were not specially chosen for my examination, but taken as they came. Sixteen of the women were over fifty years of age, several of the sixteen being nearly seventy, many of whom had been in the asylum for years.

I found out of the fifty cases, all being examined while standing up, twenty-nine (more than 50 per cent.) had one or both kidneys badly prolapsed. In nine cases both kidneys were dropped, in seventeen cases the right kidney only was dropped, and in three cases the left kidney only was down. I found one case of Glénard's disease. The cases where prolapsed kidney existed were chiefly suffering from melancholia, but also from mania and dementia, and in the very great majority of cases were *under forty years of age.* The matron, who had had no previous experience of cases of movable kidney,

was struck by the resemblance in aspect of the women in whom I diagnosed the condition. They were all thinner, taller, and more depressed than those who did not suffer from the displacement. They wore a worried unhappy look, and their faces were drawn down with the typical "dropped kidney" look. So diagnostic is this look that people whose friends suffer with this complaint, can without any medical experience pick out in others what they call the D. K. face. This observation shows the great interest the matron takes in her patients.

I intend visiting other asylums, where I feel sure of obtaining very similar results of my investigations. I have no doubt from repeated experiences in my practice, that these women are sent to the asylums without any examination for dropped kidney being made, and that the cause of insanity by dropped kidney has never previously been recognised or treated.

I did not examine any male inmates, but intend to do so at another institution. I have no doubt I shall find about ten per cent. with prolapsed kidney.

From a large and varied experience of dropped kidney cases, and realising the astounding effects upon the mental condition, I say that no man or woman should be sent to an asylum to-day without careful and repeated examination for "Dropped Kidney."

Moreover, many patients now in asylums, if operated on, would, and shall if I have an opportunity of ordering it, become sane and useful members of society once more.

A very great consideration, in addition to the one of common humanity, being an enormous reduction in the number of lunatics, now one of the heaviest burdens of this country.

The statements I make regarding my visit to the asylum can be proved by the assistant medical officer.

"THE BRITISH MEDICAL JOURNAL"

of September 16th, 1905, publishes a Memorandum which has been circulated to the Boards of Guardians in London.

This Memorandum was drawn up at a recent conference of the medical superintendents and medical officers of the Metropolitan Infirmaries and Workhouses, and was the strenuous and right note of opposition to the proposal of the London County Council to establish receiving houses for alleged cases of lunacy.

A most pregnant paragraph distinctly bearing on my present work of dropped kidney and insanity is (in writing of the large percentage of cases) "*The reason of this large percentage of cures lies in the fact that the mental state is often merely a symptom of a disordered bodily condition, and clears up entirely when that condition*

is cured. It is the deliberate opinion of the Conference that the alienist who confines his attention to, and whose horizon is bounded entirely by lunacy, *is not the best person to have the care of mental cases in their early stages.* What is wanted is great general experience, both medical, surgical, and mental, and in no body of practitioners does this combination exist more markedly than in the medical staff of the great Poor Law Institutions."

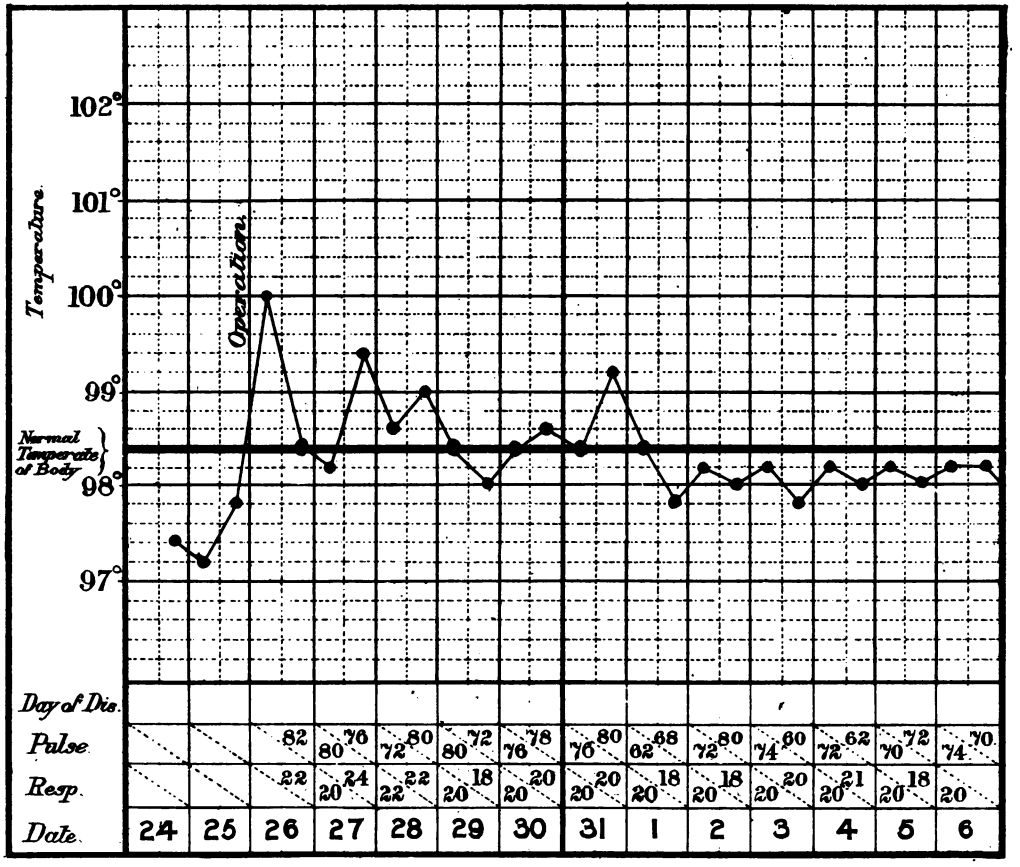
The stigma of lunacy must never be lost sight of, it is impossible to over-estimate the disadvantage attaching to an individual of whom it can be said that they have been "under restraint" or "put away" as a lunatic.

THE PRIVATE HOSPITAL,
70, NEWHALL STREET.

Oct. 6. 1905.

These charts are true Copies, undetected, of numerous operations in Cases of Dropped kidney, sent by Dr. Suckling to the Hospital during the past few years.

C. Lavery
Malta.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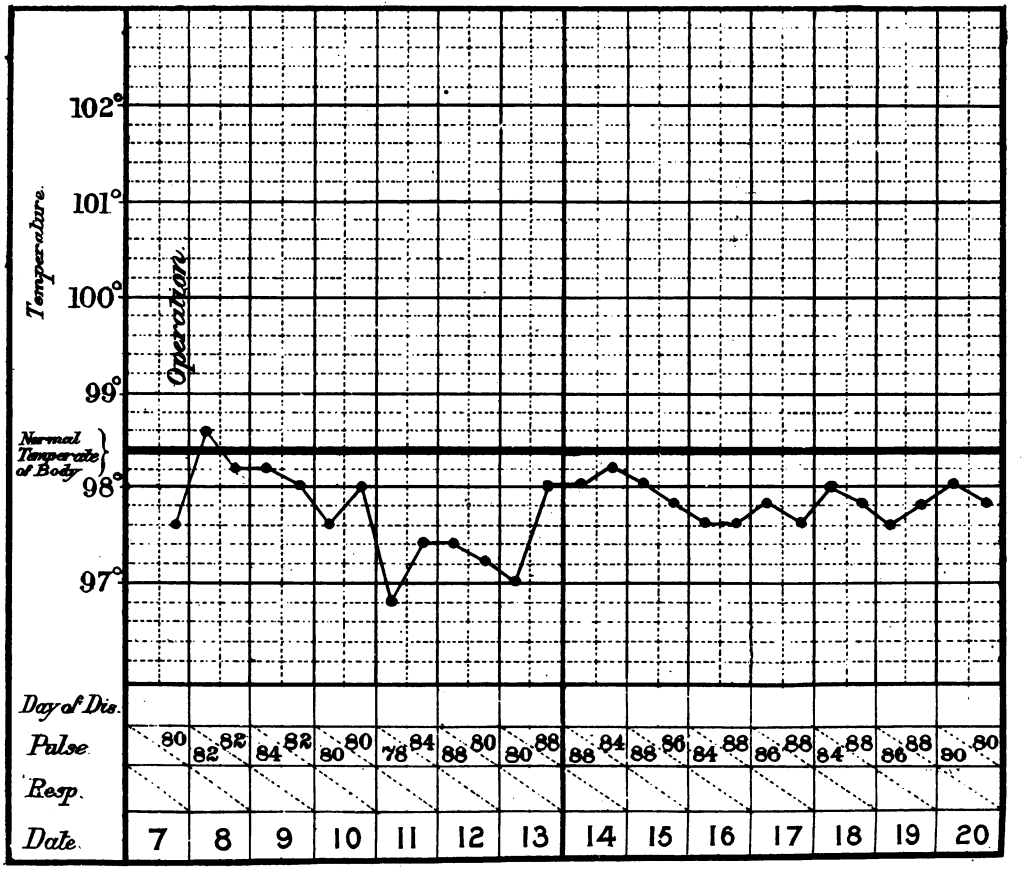
(CASE XVII.)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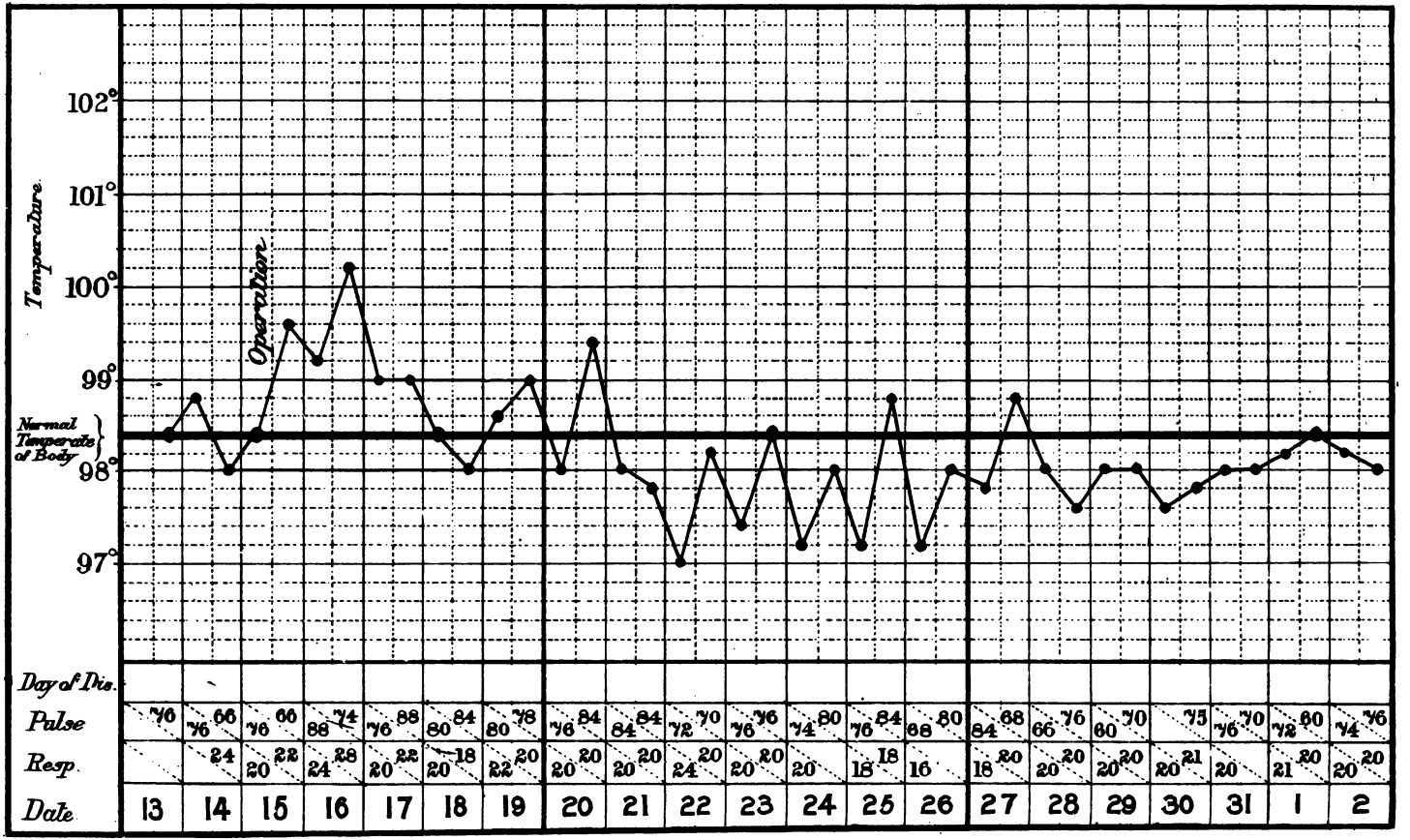
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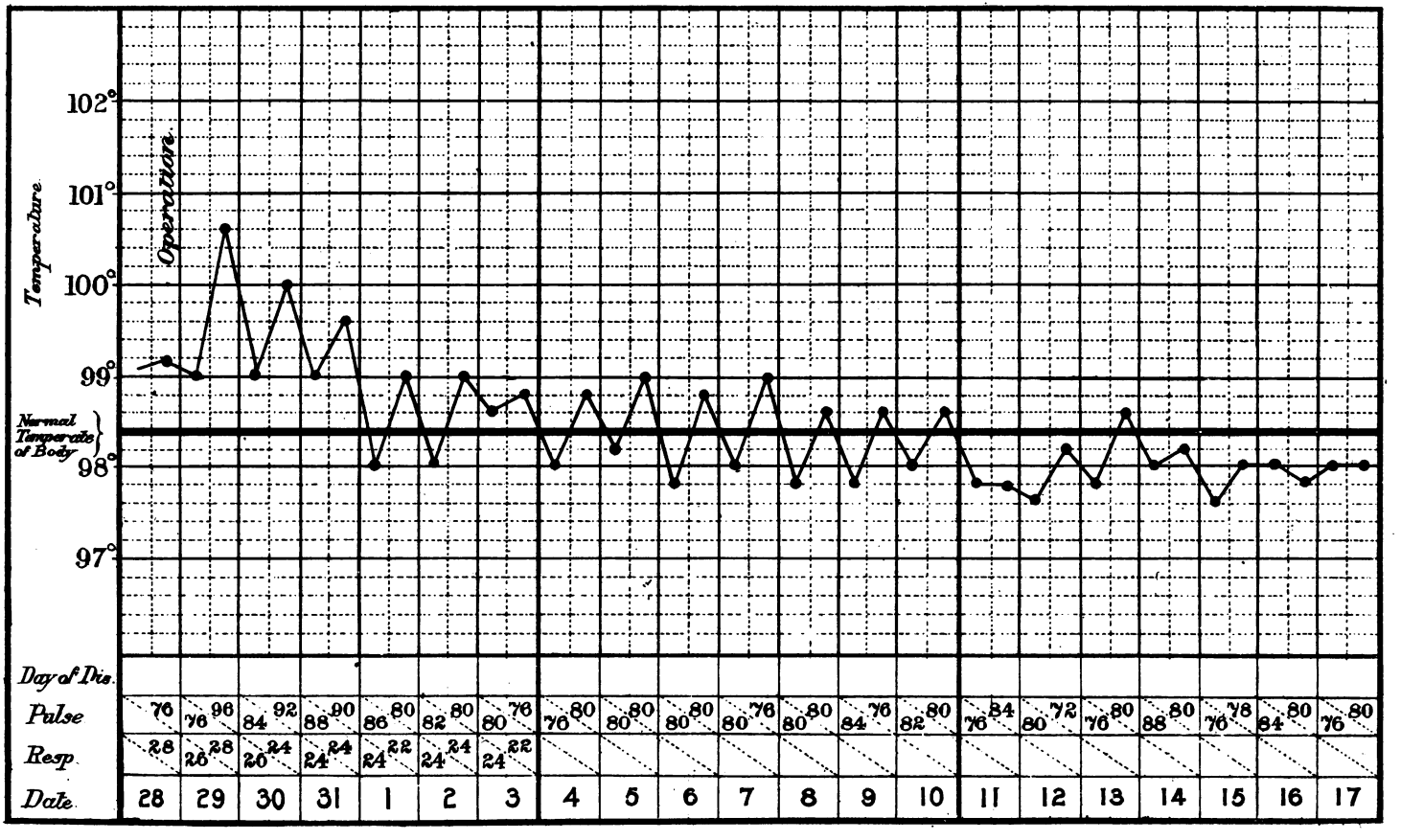
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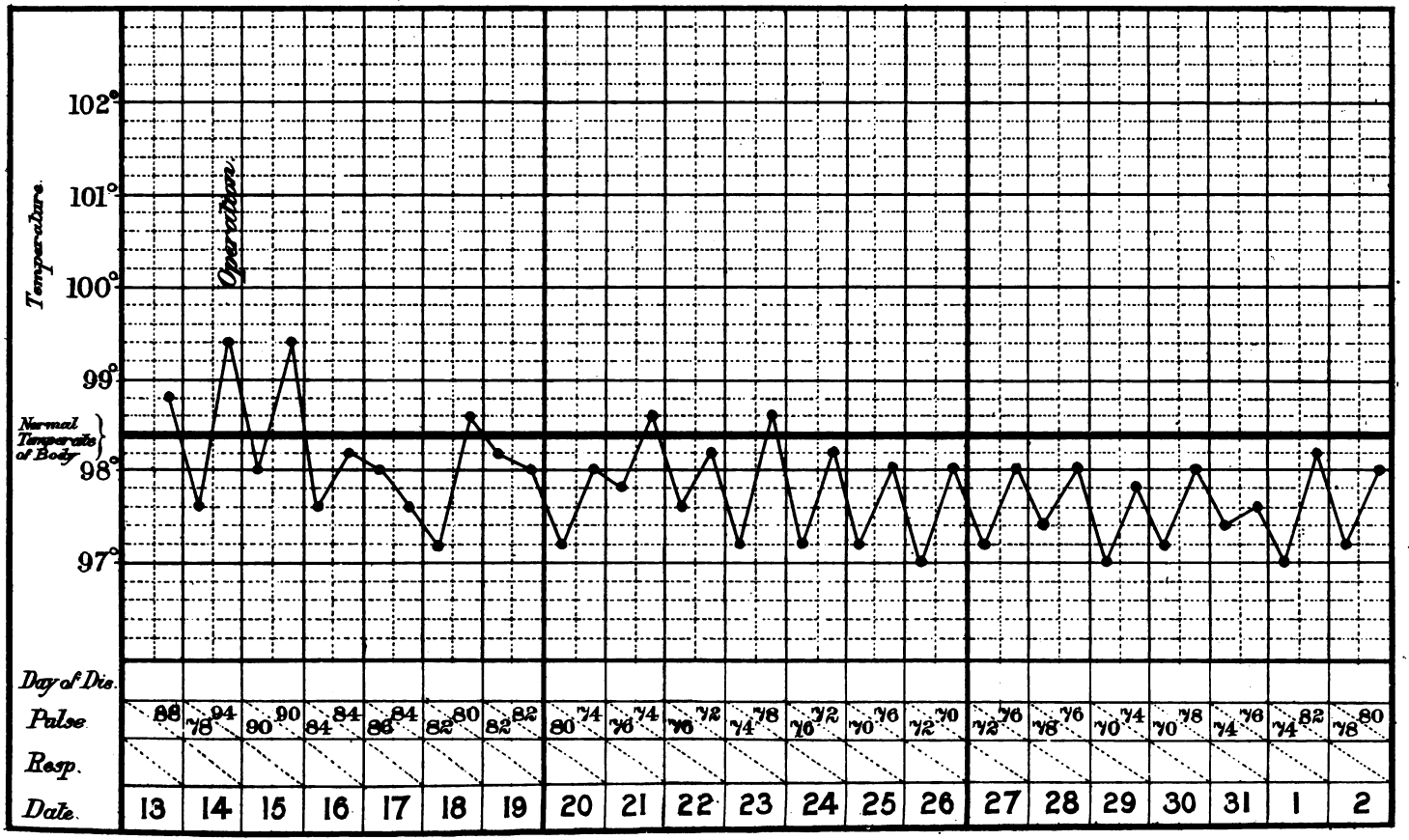
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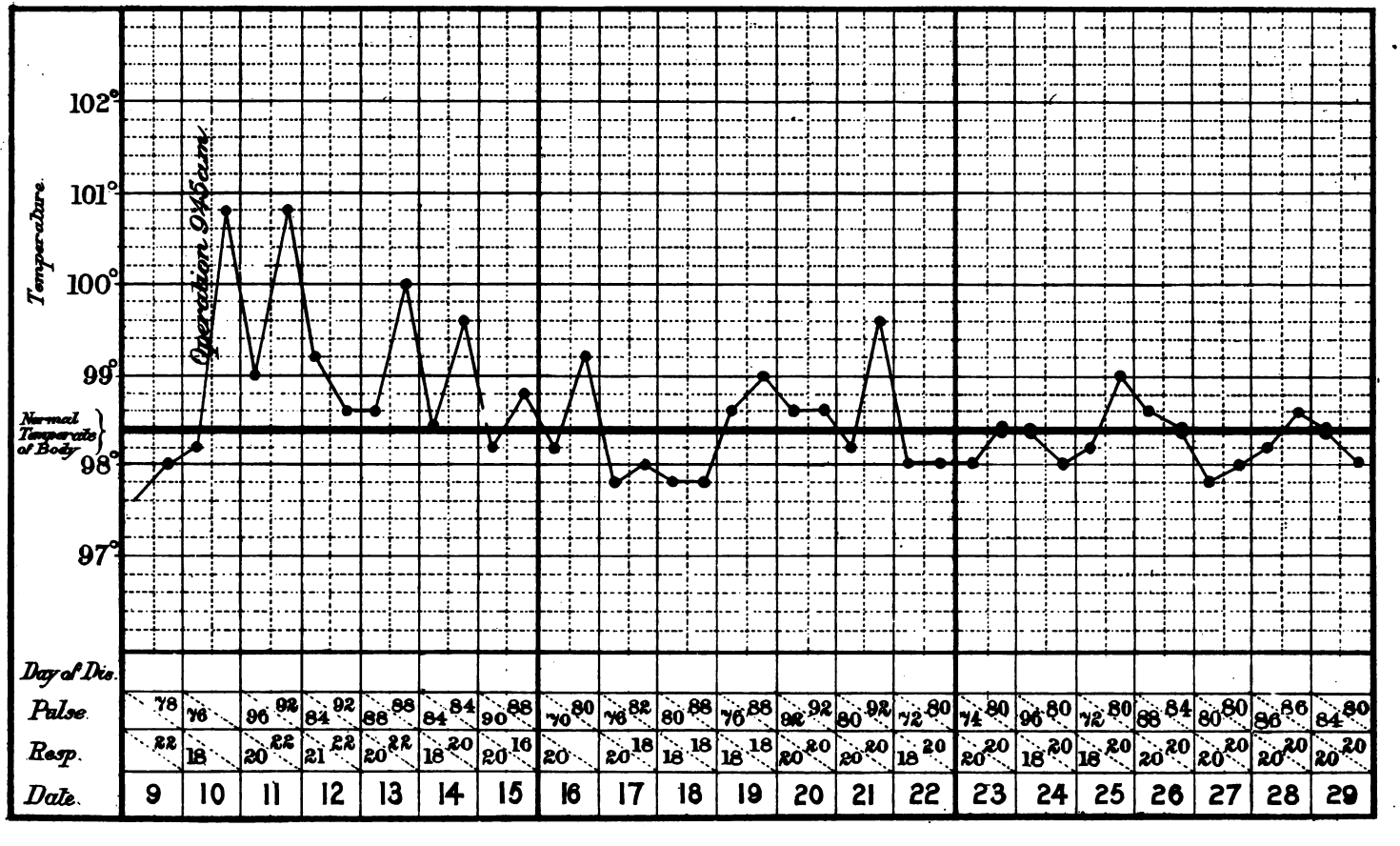
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APPENDIX.

A PERSONAL EXPERIENCE OF NEPHROPEXY.

By Jordan Lloyd, F.R.C.S., Etc.

Professor of Operative Surgery in the Birmingham University.

A personal experience of nearly thirty nephropexies performed according to a "Method of Suturing the Prolapsed Kidney," originally described by Augustin H. Goelet, M.D., of New York, in the "Annals of Surgery" for December, 1903, has satisfied me with the advantages of this operation over all others I have tried. This particular method of suturing the kidney to the parieties has practical merits which none of the other procedures known to me can lay claim to. The operation is not difficult to perform by anyone in the habit of doing renal surgical work; the length of external wound and the disturbance of deeper structures are reduced to a minimum; the shock of the operation, even when both kidneys are dealt with at the same time, is less than one would expect, and has given rise to no anxiety in any of my cases. The single operation can be completed in about twenty minutes, and the double one well under three-quarters of an hour. The bleeding is trifling, and most operations

have been done without the ligature of a single vessel. In the majority of my cases fibrosis of the perirenal connective tissue has been a conspicuous feature, necessitating the free use of scissors for its division before the kidney could be separated from its surroundings. In the majority, also, the kidney has been larger and somewhat harder than normal. In only a few instances has it been impossible to get the kidney out on to the loin; in such cases the accurate arranging of the kidney-supporting sutures is sometimes difficult. The peritoneal cavity has been opened once only, and then for less than half an inch, and without harm resulting. The kidney pelvis and ureter have in every instance been carefully examined, visually and by palpation; such examinations are not troublesome when the kidney has been everywhere completely separated from all its surroundings, as it should be, and is held in only by the special structures passing into the hilum. In more than half of the right sided cases the kidney has been found below the mid-level of the external wound. The amount of perirenal fatty tissue varies considerably, and is not always proportionate to the general fatness of the patient. Pain after operation has never been severe, and is often absent altogether. Every one of my wounds have healed primarily and under a single dressing. I have seldom drained either with tube

or gauze, although one has often been tempted to do so by the great cavity which remains below when the kidney is pulled up and fixed in its new position. I have several times found it impossible to fix the kidney as high as one wished, for the reason that there has been insufficient space beneath the ribs to receive the organ. This difficulty is principally met with in the "corset-chested" and on the right side. All operations on the left kidney are more difficult than those on the right; the organ is more deeply fixed and is usually less mobile than its fellow. I have used fish gut sutures throughout, and have followed closely the instructions given by the author of the operation. I have always operated on a kidney, with the patient lying on the opposite side, with a firm pillow placed under the loin, and prefer this position in Goelet's operation also. Renal operations with the patient in the prone position have some disadvantages; they certainly seem awkward to the surgeon, who works from behind a patient in the lateral position, and I think possibly the risks of the anæsthetic are increased.

So far as I am able at present to judge from my own observation, the fixation secured by this operation is satisfactory and permanent.

METHOD OF SUTURING THE PROLAPSED KIDNEY.[1]

By Augustin H. Goelet, M.D.,
of New York,
Professor of Gynæcology in the New York School of Clinical Medicine; Gynæcological Surgeon to the Metropolitan Hospital for Women and Children.

I present herein a technique for fixation of the kidney that I have employed with satisfactory results for the past three years. During this time —since September 14, 1900, when I first made use of it—I have done by this method 171 consecutive nephropexies on 134 patients, in thirty-seven both kidneys at the same time, without a death and without a failure to secure sufficient fixation. I make it a point to follow up my cases and submit them repeatedly to examination after operation. In only one of my cases within the past three months I have discovered, upon recent examination, that the left kidney, which was fixed with its fellow on June 23, is not entirely immovable. The patient is a very thin subject, and the kidney can be palpated and moved

[1] Read before the Surgical Section of the New York Academy of Medicine, October 12, 1903.

TEL. 736 COLUMBUS.

CONSULTATION HOURS: 11 A.M. TO 1 P.M.

DR. AUGUSTIN H. GOELET,
2030 BROADWAY, 70TH STREET,
NEW YORK CITY.

Sept. 15th 1905.

My dear Sir

Referring to Dr. Deaver's request for permission to insert in his book the description of my method of fixing the kidney. I will send you under separate cover two reprints illustrated, describing the operation.

I would like very much to see a copy of the book when it comes out.

With best wishes for the success.

Yours very truly

A. H. Goelet

upward, but the movement downward is restricted, so that the result may be regarded as satisfactory.

The explanation of the incomplete fixation in this case is that the patient's condition was most unfavourable for operation at the time it was undertaken, and there was unusual retching and vomiting following the anæsthetic, both at that time and some ten days later, when an abdominal section was done for intrapelvic disease.

There are several points I find essential for success with this as well as any other method of technique employed for this condition, namely,—

(1) The patient should be carefully prepared so as to obviate or minimize the disturbance produced by the anæsthetic and consequent retching and vomiting following the operation.

(2) Particular care should be taken to completely detach the colon from the kidney, so as to obviate subsequent dragging upon it when the bowel becomes distended, which will either tear it loose or cause pain.

(3) Reattachment of the colon to the kidney must be prevented. This can be done by packing a gauze drain under and in front of the kidney and resorting to early evacuation of the bowels.

(4) The sustaining sutures must be inserted under the fibrous capsule in a manner to obviate tearing or cutting through that structure when

they are tied, and the suture material must be one that does not soften, stretch, or absorb, as this would permit the kidney to drag upon its attachment before it is firm. For the same reason the sutures should not be tied to the muscles, but should be brought out upon the surface of the back and tied as described in the technique below. Nor must the sutures be removed until sufficient time is allowed for firm attachment.

(5) The kidney must be restored by the operation to its normal position, and should not be attached lower down than normal, where it may become compressed by the corsets or clothing around the waist.

(6) The detached, redundant fatty capsule must not be permitted to become insinuated between the kidney and the structures to which it is desired to have it adhere. As this may occur after closure of the wound, I favor the packing of gauze around the lower pole of the kidney, which is retained for forty-eight hours.

(7) The patient must be kept strictly on the back during the period of confinement to bed when both kidneys are involved; or should be turned only on the affected side when one kidney has been subjected to the operation; and she must not be permitted to get up earlier than three weeks.

(8) The operation should be resorted to before the health of the patient is seriously impaired and before the kidney has become seriously disabled or diseased.

(9) Conditions dependent upon the prolapse must receive attention as well, and should be corrected after operation.

Technique of the Operation.—The patient when anæsthetized is placed prone upon the table, with an air-pillow under the abdomen, which increases the costo-iliac space by bending the spine forward and forces the kidney up into position. A vertical incision is made through the skin and fat down to the first layer of muscles, beginning just below the last rib and extending downward parallel to the outer border of the erector spinæ muscle for about three and a half inches. The thin fascia or sheath covering the first layer of muscle is divided with scissors to the extent of the incision above and below; and the muscle beneath (the latissimus dorsi) is separated in the direction of its fibres by means of blunt hooks

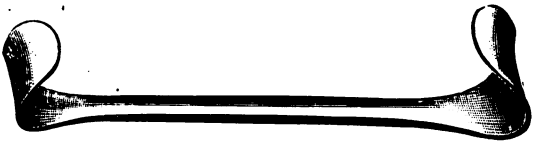
FIG. 1.

Author's blunt hooks.

and held apart by broad retractors. (Fig. 1) Keeping to the outer side of the erector spinæ

muscle, the fascia attached to its border is penetrated and separated to the limit of the incision above and below by the blunt hooks also, and its margin included in the broad retractors. (Fig. 2). This exposes the quadratus

FIG. 2.



Author's universal retractors.

lumborum muscle, which is carefully drawn aside and included in the retractor on the spinal side of the incision. Then, with blunt hooks the transversalis fascia is penetrated near the upper angle of the wound and split downward by traction upon the blunt hooks. This avoids wounding the iliohypogastric nerve and its accompanying vessel which crosses obliquely the line of incision in front of the quadratus lumborum muscle.

The margins of this fascia are also included in the broad retractors. The fatty capsule surrounding the kidney is exposed beneath this fascia and bulges up into the wound as soon as it is divided. A loop of intestine will usually protrude with this fat, and the operator must be careful to avoid it in opening the fatty capsule to expose the kidney.

The kidney is now located by inserting the finger and sweeping it around over the surface of its fatty investment, and will usually be found up in its normal position. The fatty capsule is dragged downward and opened with scissors well up towards the upper angle of the incision and well over towards the spine so as to avoid opening into the peritoneal cavity or wounding the intestine which bulges up into the wound, and the incision is extended in a vertical direction downward upon the finger as a guide. The margins of the fatty capsule on each side are seized with T-forceps, and traction is made upon them to bring the kidney up into the wound. In adjusting the T-forceps to the outer margin of the fatty capsule care should be taken not to include the intestine or peritoneum.

If the peritoneum is inadvertently opened in exposing the kidney, no harm will result if it is immediately closed by a running suture of fine catgut. The incision then to expose the kidney is to be made further over towards the spine. The accident should not occur if the kidney is in position and is properly located before the incision into its capsule is made.

The fatty capsule is detached from the kidney with the finger, aided by blunt-pointed scissors, where particularly resisting bands of adhesion are encountered. The lower pole of the kidney is

freed first, then traction upon the fatty capsule will bring it up into the wound. If the kidney cannot be delivered through the incision by traction upon the capsule the patient is rolled downward upon the air-pillow, which brings its pressure more directly upon the border of the ribs and forces the kidney up into the wound. To aid delivery of the kidney, it may be grasped with a pad of gauze held between the fingers and thumb.

It is not always necessary to deliver the kidney through the incision in order to detach the fatty capsule and insert the sustaining sutures; and it consumes more time. When, therefore, complete detachment can be readily accomplished without doing so, this part of the technique may be omitted.

The fatty capsule should be completely detached from the kidney around both poles and on each side back to the hilum. Thus complete detachment of the colon and duodenum in front is effected, and behind, the kidney is left bare of its fatty investment for subsequent adhesion to the muscles at the back.

The pelvis and ureter are always carefully explored for stone.

The fibrous capsule is not split or detached from the kidney, nor is its surface sacrificed. I have found this to be quite unnecessary. Firm

adhesion of the kidney with its fibrous capsule intact can be invariably secured if the kidney is held immovably in contact with the opposing structures for a sufficient length of time. To accomplish this, however, the suture material should be one that does not stretch or become absorbed, and it must be inserted and tied so that the suture loop does not become loosened by cutting into the tissues. We have in silkworm gut a material that meets these requirements, and to render it pliable it is boiled and preserved in a 3 per cent. solution of lysol. My record of 171 nephropexies by this method without a failure to secure fixation shows conclusively that stripping off the fibrous capsule or further mutilation of the kidney as by sutures which transfix the parenchyma is quite unnecessary.

The sustaining sutures, two in number, are inserted upon the posterior aspect of the free border of the kidney. One, the lower, is inserted at about the junction of the middle and lower thirds of the organ, and the other at about its centre or midway between the poles. The suture is threaded into a small, full-curved needle one inch long, and it is bent sharply at the eye of the needle and twisted tightly to avoid tearing the capsule as it is drawn through. (Fig. 3).

The sutures are introduced in this manner, viz.:

The needle is inserted first from above down-

ward in a direction somewhat obliquely inward to the long axis of the kidney, and penetrates only beneath the fibrous capsule for about half an inch, and the suture is drawn through; then it is inserted transversely a little below the point of

FIG. 3.

Author's kidney needle.

exit of the first insertion, penetrates beneath the fibrous capsule, about half an inch, and the suture is drawn through; then it is again inserted obliquely from below upward at a point opposite the first insertion about an inch from it, and the suture is carefully drawn through (Fig. 4). The needle is removed, and the two ends are clasped temporarily with a hæmostatic forceps.

The second suture is inserted in a similar manner just above the first.

Thus, it will be seen that there are three insertions of the suture under the fibrous capsule and two bridges of suture exposed on the outer side of the fibrous capsule. It is upon these two bridges of exposed suture that the strength of the suture depends. In testing this suture, it will be observed that the strain upon it is in a direction parallel to the surface of the kidney and its

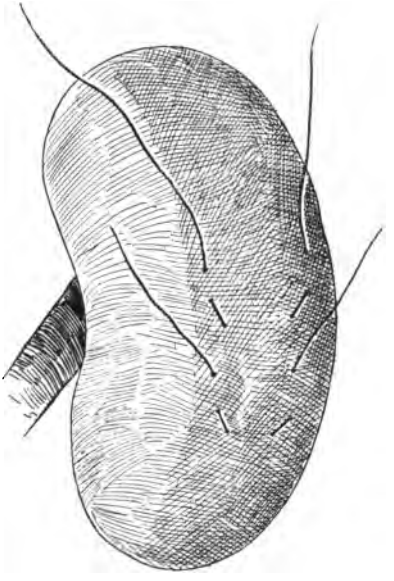


FIG. 4.—Author's suture inserted.

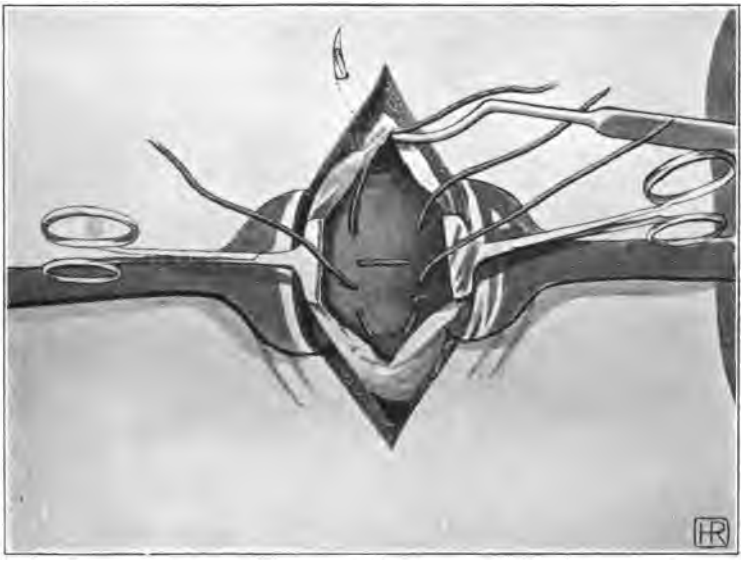


FIG. 5.—Showing suture in position and method of carrying the ends of the suture through the structures of the back and bringing them out on the surface at the upper angle of the wound

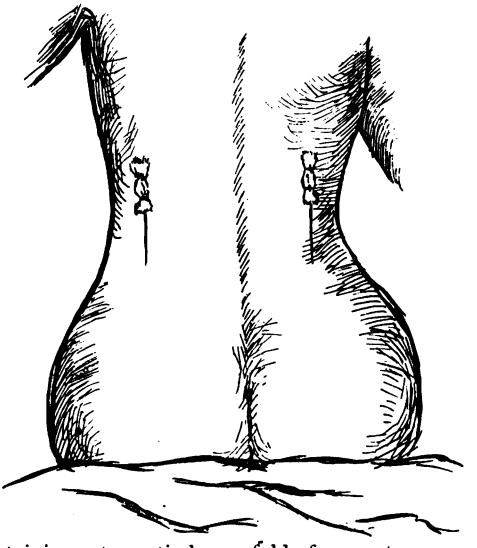


FIG. 6.—Sustaining sutures tied over fold of gauze to prevent loosening of the suture loop.

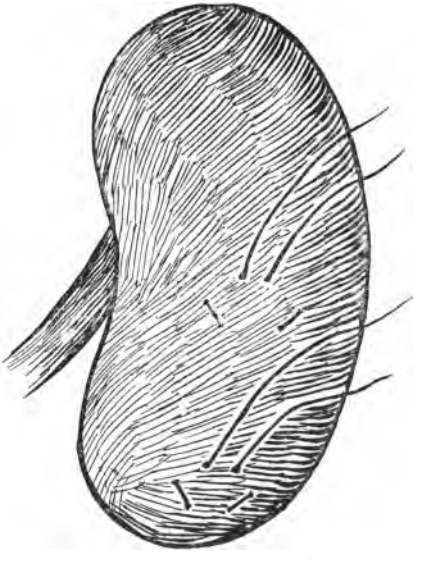


FIG. 7.—The Brödel suture, for comparison.

capsule, and not at right angle to it, as is the case with the transverse suture and all other forms of sutures employed for the purpose of sustaining the kidney. This suture will resist a very considerable strain upon it without cutting out, very many times more strain than the transverse suture which penetrates the parenchyma or any suture inserted the detached fibrous capsule, and it does not mutilate.

Before replacing the kidney into its normal position, the redundant fatty capsule behind is trimmed off with scissors or torn off, and that in front also, but here care is necessary to avoid encroaching upon the peritoneum or bowel. The fat about the lower pole is not removed, but left to form a cushion for the kidney to rest upon.

The ends of the sustaining sutures that have been inserted into the kidney are carried through all the structures of the back and brought out on the surface at the upper angle of the incision,—a long, curved, perineal needle with eye near the point being utilized for this purpose (Fig. 5). The sutures are tied over a fold of several layers of gauze placed lengthwise to the incision at its upper end. This forms a cushion for the suture-loop to rest upon and prevent the sutures from cutting through the skin and consequent loosening of the loop (Fig. 6). When tied,

these sutures bring the kidney up into its normal position, with its upper pole under the ribs.

A gauze drain is now packed about and under the lower pole of the kidney, forcing back the fat that has not been removed and the bowel which bulges up below the kidney, and its end is brought out at the lower angle of the wound.

The wound is closed by uniting the divided superficial fascia and upper borders of the muscle with a running catgut suture, and the skin is united with a subcuticular suture. A bountiful supply of loose, aseptic gauze is applied next to the wound, and over this is placed a thick pad of absorbent cotton covered with gauze, and this is held in place by adhesive strips and a binder encircling the body.

In many cases where the fatty capsule is thin or not redundant, I dispense with the gauze packing and drain, closing the wound without it, and this method has succeeded quite as well as where the gauze drain was employed.

After-care of the Wound and of the Patient.—When drainage is employed, the dressings are removed at the end of twenty-four hours, as they are usually found soaked and make the patient uncomfortable. At the end of forty-eight hours the gauze drain is removed and the dressing renewed; after this the dressing is renewed when necessary.

The sustaining sutures are not removed until the twentieth day, or the day before the patient gets out of bed. The exposed portion of the loop of each suture on one side of the gauze cushion is cut, and the suture pulls out readily, adhering to the gauze when it is lifted off. A simple dressing of gauze is applied afterwards.

When renewing the dressings, the patient should be turned on the affected side, to obviate dragging on the freshly attached kidney; and, if both kidneys have been fixed at the same time, she should be turned preferably on the right side, since it is the right kidney that is usually most displaced; but in those cases where the left kidney at the time of operation has been found to be the larger, she should be turned on that side in renewing the dressing. During the time of convalescence, while in bed, she must be kept upon the back, or turned only on the right side, if it was the right kidney that had been fixed.

The only other suture that resembles this, which I first described in the *Medical Record* of June 1st, 1901, and repeatedly since (*Philadelphia Medical Journal*, October 26th, 1901; *American Medicine*, December 28th, 1901; *International Medical Magazine*, March, 1902), and which I first employed on September 14th, 1900, and the second time, October 18th, 1900, is the Brödel suture, first used by Cullen, of Baltimore, October

26th, 1900, a description of which was first published by Brödel in *American Medicine* of August 2, 1902 (Fig 7).

The essential differences between the Brödel suture and the one which I have just described are as follows :

(1) The apex of the triangle formed by the suture is above, the ends emerging on the surface of the kidney near together. In my suture the apex of the triangle is below, the ends of the suture emerging on the surface more apart from each other, because they are brought out and tied on the external surface.

(2) The sutures are placed at a greater distance apart, the lower suture at the lower pole; and they include less area of surface. My suture does not include the lower pole, which is left normally free, and it includes a larger area of surface.

(3) The suture material is silk, while mine is silkworm gut.

(4) The sutures are tied to and buried in the muscles, while mine are brought out upon the surface and tied over a pad of gauze.

THE POSITION OF THE KIDNEY AFTER NEPHROPEXY.

By AUGUSTIN H. GOELET, M.D., New York.

Professor of Gynæcology, New York School of Clinical Medicine, Gynæcological Surgeon to the Metropolitan Hospital for Women, etc.

The contention that the position of the kidney after nephropexy is unimportant is, I think, an error. Fixation, without restoration to its normal position, certainly does not facilitate restoration to normal action of the kidney already crippled in consequence of displacement. If neither remedies the interference with its circulation and function coincident with the prolapse, nor does it afford entire relief of the symptoms, It is not the mobility of the kidney that causes disturbance, but its exaggerated downward displacement. On the contrary, fixation of the kidney lower than normal is more objectionable than mobility, for it is then in a position where it will be compressed by the corsets or clothing, constricting the waist, and cannot escape as before.

Fixation lower than normal, however, obviate overlapping and compression of the ureter and ovarian vein by the kidney. This, as I

have shown,[1] is an important element in producing female pelvic disease by maintaining congestion of the pelvic organs through obstruction of the return circulation therefrom. But fixation in that position does not obviate the more or less constant congestion of the kidney, due to interference with its circulation resulting from the displacement. Nor does it obviate accumulation of urine in the pelvis owing to flexure of the ureter, which remains attached at a higher plane than the kidney. Hence, such a position of the kidney cannot have any beneficial effect upon the associated nephritis which, as I have shown,[2] is present in the majority (75 per cent.) of these cases as the result of the prolapsed position of these kidneys and interference with their circulation and function.

Fixation of the kidney lower than normal may account for many of the failures to obtain relief from the operation which has brought discredit upon it. Several such cases have come under my observation, where anticipated relief after operation had not been experienced, and where these patients were in a worse condition than before.

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[1] Paper read before the Section of Diseases of Women of the American Medical Association at the Saratoga Meeting. *Journal of the Association*, August 23, 1902.

[2] Paper presented at the Meeting of the New York State Medical Association, October 20, 1902, entitled "A Study of the Indications for Nephropexy." *Medical Record*, December 20, 1902.

My attention was more forcibly directed to this abnormally low position of the kidney after fixation in a case where I had the honour to assist Professor Jean Faure, of Paris, in doing the operation as done by the French surgeons. The sutures securing the kidney transfixed the kidney structure at a considerable distance from the surface and were fastened to the muscle exposed in the wound. (Method of Guyon). The kidney was left in a position much lower than normal, with its upper pole some distance below the twelfth rib. Hence, the patient has still a prolapsed kidney, and the only thing that has been remedied is its mobility. The other kidney was fixed by the method I so fully described in a paper at the New Orleans meeting of the American Medical Association last year,[3] and the contrast of the position of the two kidneys was marked.

Professor Faure expressed himself pleased with my method of fixation, because it secured the kidney in its normal position, and said he would use it in his future operations. He said, however, that the French surgeons contended that it is the abnormal mobility of the kidney and not the downward displacement that makes

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[3] Fixation of the Prolapsed Kidney. *Journal of the American Medical Association*, November 7th, 1903.

the operation necessary. He evidently does not agree with them in this.

My friend, Professor Robert Morris, of New York, likewise agrees with me that replacement of the kidney in its normal position is one of the essentials of the operation and has adopted the technique I have described in place of his own, but continues to split the fibrous capsule of the kidney.

I have persistently maintained that it is unnecessary and undesirable to split or peel off the fibrous capsule; that restoration of the kidney to its normal position is sufficient to overcome the associated nephritis in these cases due to the prolapse, provided permanent fixation is secured.

It is not an unreasonable assumption that removal of the cause is sufficient for a cure. It is true in this particular instance, if structural disease of the kidney has not already advanced too far for recovery before the operation is resorted to, and if it has, it is not remedied by splitting or peeling off the fibrous capsule. My position is that any case of nephritis due to, or associated with prolapse of the kidney that is curable by fixation and peeling off the fibrous capsule, may likewise be cured by fixation alone without depriving the kidney of its fibrous capsule.

If downward displacement of the kidney causes inflammatory changes in the organ because of interference with its circulation and function, it is not reasonable to suppose that fixation in an abnormally low position will effect any change in the condition so far as the kidney is concerned.

The unusually low position of the kidney results in congestion and inflammation, because the circulation is retarded in consequence of the lengthening and narrowing of the vessels supplying the organ and the necessary upward direction of the return blood current in veins adapted to act normally on a level, and because there is interference with the outflow of the urine which permits it to accumulate in the pelvis. The ureter being attached at a higher plane than the kidney, the urine is compelled to flow upward, at least when the subject is in a sitting or erect position, which is the greater part of every twenty-four hours. But for the several hours' rest in the recumbent position during the sleeping hours, much more serious disturbance of the economy would be manifested in these cases.

If the kidney is suspended by its partially detached fibrous capsule by means of sutures secured to the muscular structure exposed in the wound, it must necessarily be held in a position much lower than normal, where it is constantly subjected to injury. If it is secured after the

manner of the French surgeons by sutures that transfix its structure, the kidney sustains an injury from which it may, or may not, recover, and the position is very much too low.

If, on the other hand, the sutures suspending the kidney are brought out on the surface of the back at the upper end of the incision, and if these sutures are inserted only under the fibrous capsule in the lower half of the kidney, its structure is not injured; and when these sutures are tied the kidney is drawn up into its normal position with its upper pole under the last two ribs.

The objection that failure to denude the kidney of its protecting fibrous capsule and to expose the raw structure for adhesion may not result in permanent fixation, does not hold, since I have obtained success with this method in 184 consecutive nephropexies.

For the benefit of those not wholly familiar with this method I will repeat here the essential points in the technique.

The kidney is exposed through a vertical incision from the twelfth rib downward along the outer border of the erector spinæ muscle. It is delivered through the incision, and the surrounding fat all around and the attached colon are completely detached, exposing the entire kidney. The sutures of silkworm gut, two in number, are inserted under the fibrous capsule

only, one at the centre of the kidney and the other midway between this and the lower pole. The kidney is then replaced and the suture ends are carried from within out and brought out upon the surface of the back at the upper angle of the incision just below the twelfth rib, and are tied over a fold of gauze to prevent the sutures from cutting into the skin and consequent loosening of the loop. These sutures are retained in position until the patient is ready to get up, three weeks after the operation.

I have laid stress upon the necessity of careful preparation of these patients for operation to obviate the strain of retching and vomiting following the anæsthetic, and also during convalesence absolute quiet in the recumbent position as essential for success.

In conclusion I must insist that the proper position for the kidney after nephropexy is the normal position with the upper pole under the last two ribs or as near this as possible, and I believe this is better accomplished by the method of suture that I have described.

2030 Broadway, N. Y.

A LIST OF THE SURGEONS WHO HAVE PERFORMED THE OPERATION OF NEPHROPEXY UPON MY CASES:—

Professor Gilbert Barling, Surgeon to the General Hospital, Birmingham.

Sir Thomas Chavasse, Surgeon to the General Hospital, Birmingham.

Mr. Leonard Gamgee, Surgeon to the General Hospital, Birmingham.

Mr. Leedham Green, Surgeon to the Queen's Hospital, Birmingham.

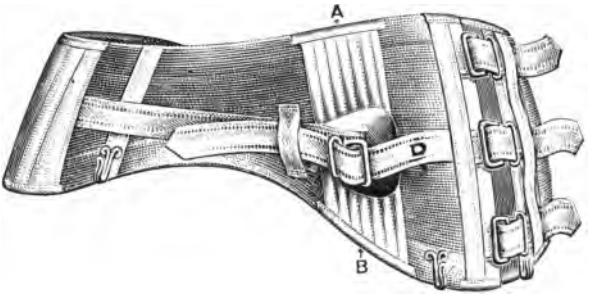
Professor Jordan Lloyd, Surgeon to the Queen's Hospital, Birmingham.

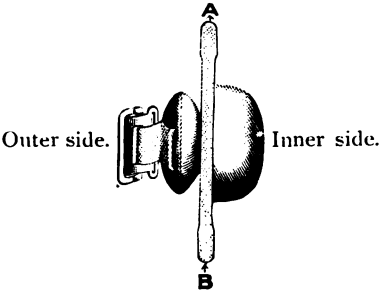
Mr. Albert Lucas, Surgeon to the General Hospital, Birmingham.

Mr. Christopher Martin, Surgeon to the Women's Hospital, Birmingham.

Professor Bennett May, Surgeon to the Queen's Hospital, Birmingham.

SALT'S BELT.





Above is represented the belt made by Salt, Cherry Street, Birmingham, which has given great relief in a large number of cases of movable kidney. A B represents strengthing of the belt by ribbing. D represents strap which I suggested, and which makes the belt efficient. C represents the air pad on the inner surface of the ribbed portion. The pressure on the air pad can be varied by the wearer, and the air pads can be inflated at will. C.W.S.

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